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THE NEW SYDENHAM
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VOLUME XXXVIII

A TREATISE ON
SYPHILIS.
HISTORICAL AND PRACTICAL.

BY

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IN TWO VOLUMES.

VOL. I.

TRANSLATED BY

G. WHITLEY, M.D.



THE NEW SYDENHAM SOCIETY,
LONDON.

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PREFACE.

"La syphilis devrait servir de clef à toute la pathologie" (Andral, dans Ricord, *Lettres sur la Syphilis*, 2^e édit., p. 302).

THE natural sciences have succeeded, for the most part, in classifying the objects with which they are engaged under a certain number of well-defined types, each of these types giving the notion of all the individualities belonging to it. Pathology, also, ought to possess an analogous classification, for the organopathic conditions of man present distinct types, always recognisable by constant characters, which permit of grouping them so as to constitute morbid species. But if, amongst the acute diseases, we know the detailed history of several species, it cannot be denied that in the domain of chronic diseases we are much less advanced. I have, therefore, thought it useful to follow in its minutest details one of these diseases.

For this purpose, I have chosen the disease which, both by its origin and by its multiple manifestations, is best fitted for an exact, complete, and varied study. I mean Syphilis. I have sought to trace out its history, not after the manner of the specialist, whose view does not extend beyond the horizon of his speciality, but after the manner of the nosographer, who finds in it only a detached chapter in the great history of diseases.

This book is divided into six parts: Historical Notice, Nosography, Semeiology, Ætiology, Treatment, and Legal Medicine.

Hereditary syphilis and acquired syphilis are studied separately. The latter is followed in its evolution by periods, and the symptoms connected with the last period are examined successively in each apparatus of the organism.

The study of the anatomical lesions has been placed before that of the symptoms, which are generally subordinate to them. The reason of this preference is, that they constitute the most invariable element and the most constant sign of syphilis. Until quite recently, it was believed that these lesions were limited to certain tissues and

to certain organs, and although, for three centuries, various visceral manifestations have been pointed out, the attention of clinical observers did not become fixed upon them. Now that the value of these manifestations is well known, it is natural to insist upon them and to accord to them the place which their importance demands.

After this indispensable work of analysis, it became necessary to turn our thoughts to the consideration of the whole, for syphilis is, in reality, an entity. I have sought, therefore, as much as possible to point out in the course of the disease, the morbid concatenation which commences with the primary lesion and terminates, too often, in cachexia and death.

To avoid prolixity and a discussion which is almost always fruitless, I have taken care to discard doubtful observations and to quote only important and well authenticated facts. In this work of elimination and selection, I should be very fortunate if I had omitted nothing ; but that is impossible. What I can sincerely affirm is, that I have conscientiously and impartially sought the truth.

PARIS, April 27th, 1866.

SYNONYMY.

SYPHILIS is perhaps, of all diseases, that which has received at its origin the most numerous and most varied names. Unknown, at the time of its first appearance, as regarded its causes, its nature, and its treatment, it easily gave rise to all kinds of suppositions: accordingly, physicians and people in general gave full scope to imagination in respect to it. Hence the various names which reflected either the scientific preoccupations, the national rivalities, or the popular superstitions of the period.

A good many physicians, anxious to repel a calumny and an error and to keep clear of the animosities and ignorance of the masses, sought their designations either in the causes or the symptoms of the disease. To some it appeared to be only a form of Asiatic lepra, whence the name of *Elephantiasis*; others saw in it a cutaneous affection already described by the Arabs, from whom they borrowed the term *Sahafati*. But what was most striking of all, was the resemblance of the new disease to the small-pox known since the sixth century. The French, therefore, to distinguish it from the latter, call it the *great pox* or *vairole*; the Flemish and the people of Picardy, *les poques*; the Spanish, *las bubas* or *bubas* or *boas*; the Genoese, *lo male de le tavelle*; the Tuscans, *il malo delle bolle*; the Lombards, *lo male delle bozzole*; the Savoyards, *clavelée* or *claveau*; the Germans, *grosse Blatter*; others, *gorre*, *grande gorre*, *scorra pestilentialis*, *morbus pustularum*, *malæ pustulæ*, *gale pustuleuse*, *vésicules épidémiques*, *crystalline*. The names in use at St. Domingo recall the same analogy: *guaguara*, *hipas*, *taybat*, *ycas*. The influence of astrological ideas gave origin to the words *Patursa* (*passio turpis saturnina*), *saturnine* disease, because the cause of it was attributed to the conjunction of Saturn and Mars. The term *Pélade*, says Sauval, arose from the number of persons seen to be shorn so thoroughly without razors. J. de Béthencourt, a physician of Rouen, adopted the name *maladie vénérienne*, which Fernel after

him employed by preference under the Latin form of *lues venerea*. Fracastor had already published his poem in which figures the shepherd Syphilis, destined to become the most durable incarnation of the new disease.

Such were the chief names employed by the physicians and surgeons of the time. They did not suffice : national rancours and political enmities found opportunities for satisfying themselves, and nations reciprocally imputed to each other the introduction of the scourge. The Italians and Neapolitans called it *mal francese*, *mala de Frantzoz*, a name which the Germans hastened to adopt, *Franzosen*, *französische Pocken*. The English gave it the name of *French pox*. In like manner, and with at least as much reason, the French called it *mal de Naples* ; the Flemish, *Spanish pox*, *spanse Pocken* ; the Moors, *mal espagnol* ; the Portuguese, *mal castillan* ; the Indians, *mal des Portugais* ; the Turks, *mal des chrétiens* ; the Persians, *mal des Turcs* ; the Poles, *mal des Allemands* ; the Russians, *mal des Polonais*.

To these names, mementos of old enmities, must be added, to complete the list, those which the mass employed in certain countries, and which were only the expression of their superstitious belief as regards the cure. Thus we see the *morbus novus* become, with Germans, *the disease of St. Mevius*, or of *St. Main* ; with the Catalans and Aragonese, *the disease of St. Sement* ; and elsewhere *the disease of St. Job*, of *St. Reine*, of *St. Evagrus*, of *St. Roch*, &c.

The following lines show how a poet of the period, Jean Lemaire,* calls to mind in his quaint language this multiplicity of appellations :—

Ne seut onc lui bailler propre nom,
Nul médecin, tant eut-il de renom.
L'ung la voulut *Sahafati* nommer
En Arabic ; l'autre a peu estimer
Que l'on doit dire en latin *Mentagra* ;
Mais le commun, quand il la rencontra,
La nommait *Gorre* ou la *Vérole* grosse,
Qui n'espargnoit ne couronne, ne crosse ;
Pocques l'ont dit les *Flamens* et *Picquarts*.
Le *Mal françois* la nomment les *Lombarts*.

* *Les trois comptes intitulés de Cupido et d'Atropos, dont le premier fut inventé par Straphin, poète Italien, le second, et le tiers de l'invention de maître Jean Lemaire, 1525.*

Si a encores d'autres noms plus de quatre,
Les Allemands l'appellent grosse Blatte,
Les Espagnols les Bouéls l'ont nommée :
Et dit-on plus que la puissante armée
Des fors François a grande peine et souffrance
En Naples l'ont conquise et mise en France,
Dont aucun d'eux le Souvenir la nomment,
Et plusieurs faits sur ce comptent et somment.
Les Savoysiens la Clavela la dissent :
Delà comment plusieurs gens en devisent,
Delà comment Amour, le jeune ivrongne,
A fait aux gens grand dommage et vergongne.
Et ne scet-on pour ses clous desclouër,
Bien bonnement a quel saint se vouer.
Néantmoins aucuns, par grace souveraine,
Ont imploré madame sainte Reine,
Les autres ont eu recours a saint Job ;
Peu de guéris, en sont de morts beaucoup,
Car règne a ce trez cruel torment
Par tout le monde universellement.

TREATISE ON SYPHILIS.

PART I.

HISTORICAL NOTICE.

WE search in vain amongst ancient writers for a dogmatic definition of syphilis, which is nowhere to be met with. The first physicians who gave a somewhat detailed description of this disease, at the time of the well-known epidemic of 1495, had to ask themselves whether the malady which they had before their eyes were new or not; and from that period two opinions were expressed which have never ceased to prevail amongst scientific men. The first dates the commencement of syphilis from the end of the fifteenth century; the second attributes to it a much more remote origin. Differing much as to the place of its birth, the advocates of the doctrine of remote origin regard syphilis as a kind of leprosy, and call it sometimes elephantiasis (Seb. Aquilanus, Phil. Beroaldus), sometimes formica (Schellig, Cumanus, Gilinus, Leoniceus, Steber), sometimes saphati (J. Widmann, Not. Montesaurus, J. de Fogueda, Sim. Pistor). Supported by these views, Sydenham, Haller, Plenck, Thierry, Howard, looked upon yaws and pians as the primitive form of syphilis, and pointed to Africa as the birthplace of this disease, the first traces of which they believed to have been found amongst the Maranians (Gruner). Other authors, as Swediaur and Beckmann, classing it with the Persian fire, believed it to have come from the East Indies, while Wizmann asserted that it first appeared in Dacia, during the second century.

However, when it was positively established that syphilis resulted from the act of sexual intercourse, some writers sought to prove that this disease existed from the earliest times; but at the same

time the most fantastic accounts were given of its first origin. It was no longer attributed, as previously, to an inauspicious constellation, but rather to the cohabitation of a prostitute with a leper, or with animals, especially monkeys; or to cohabitation with the voluptuous Indian women of America; and it was chiefly from this latter supposition that sprang the idea of the pretended American origin of syphilis, of which Astruc and Girtanner were the chief supporters.

Such are, then, the various hypotheses presented to us.

They are reducible to three:—

I. Ancient origin in the whole world;

II. Ancient origin, starting-point unknown; modern importation into the East;

III. Recent origin, epigenesis at the end of the fifteenth century.

All that which tends to support the two first hypotheses naturally militates against the last, which, moreover, finds but few supporters at the present day. The successive study which we are about to make of syphilis in early times, in the Middle Ages, and from the fifteenth century to the present time, will teach us what value to attach to them.

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CHAPTER I.

SYPHILIS IN ANCIENT TIMES.

ASSERTED first of all by Sanchez, propagated later on by Hensler and by the bibliographical researches of Gruner, of Jena, supported with great talent by Cazenave and Rosenbaum, the doctrine of the antiquity of syphilis rests upon numerous data borrowed, on the one hand, from the works of Chinese, Indian, Greek, and Latin physicians; on the other, from the epigrams and satires of the early poets. Let us examine what is furnished by these various sources.

§ 1. *On syphilis amongst the nations of China and India.*

With the exception of a passage from the work of Astruc,* in which it is stated that the medical works written in the Chinese language merely speak of the venereal disease as a disease of great antiquity, our information on the state of syphilis in China was very slight until the appearance of the interesting work of Captain Dabry.†

This work, which contains important data on the subject, is a kind of compilation of Chinese medical writings, the most ancient of which go back as far as Hoang-ty, 2,637 years B.C., but the most recent of which is almost of our own time. Unfortunately, the author, as Verneuil‡ has judiciously remarked, being but little familiar with historical and bibliographical requirements, has not taken care to quote sufficiently often the sources from which he obtained his information. Although there has resulted from this a certain doubt concerning the chronology of the doctrines, precepts, and observations quoted, the antiquity of syphilis in China appears indisputable. Chancre cannot fail to be recognised in the work in question, in which it is the object of a detailed description. A corroding ulcer, produced by a poison of a particular kind, and com-

* *Traité des maladies vénér.*, trad. de Louis, t. ii. p. 346.

† *La médecine chez les Chinois*. Paris, 1863.

‡ *Archiv. génér. de méd.*, 1863, t. i. p. 625.

SYPHILIS IN ANCIENT TIMES.

municable by direct contact, is met with on the genital organs of the male and female; and further, within the canal of the urethra, in the mouth and throat, in the nose, and at the anus, or at the termination of the large intestine. It generally appears from the third to the ninth day, either singly or accompanied by a great number of other lesions of the same kind. It begins as a small red spot, raised at its centre, and causing either pain or violent itching; in a short time a white spot appears in the centre, which forms a cavity, and increases insensibly in size and depth. At the base is seen and felt a kind of hard, thick skin, of a whitish colour; the edges become equally hard, with irregular notches. The consequent ulcers of the mouth, throat, and nose, the mucous patches of the anal region, in a word, the whole series of secondary lesions is described at length; in a concluding paragraph, headed *Chancre of the nose*, tertiary lesions are pretty clearly indicated,—sanious discharge, ulceration, destruction of the septum, &c.

In India, as in China, syphilis is not a new disease. The Suçrutas,* a work written about the year 400, and which may in some respects be called the Hippocratic treatise on Indian medicine, contains passages in which it would be difficult not to recognise syphilis. Of the symptoms mentioned, some are local, affecting the genital organs, while others, more general, are seated elsewhere. The poison, it is said, enters the penis, corrupts the flesh and the blood, causes an irritation, whence results a wound, upon which crusts form, having a serous discharge. These lesions destroy the penis and cause sterility. In the female, the poison which enters the sexual organs causes fungous, sanious, and fetid excrescences. In these passages, chancre alone is recognisable, but in the following one there is reason to believe that the subsequent forms of syphilis are alluded to. "The humours put into motion travel towards the upper parts, giving rise to warty excrescences in the nose, the eyes, the ears, and the mouth. When the ear is affected, deafness ensues, the ear is painful and exhales a fetid smell. When the nose is affected, there is sneezing,

* *Suçrutas A'yurvedas*, id est medicinæ systema, a venerabili D'hanwantare demonstratum, a Suçruta discipulo compositum. Nunc primum ex sanskrita in latinum sermonem vertit, introductionem, annotationes et rerum judicem adjecit Dr. Frانسiscus Hessler, t. i. p. 3. Erlangen, 1844-1850. See also commentary on the Hindu system of medicine, by T. A. Wise, Bengal Medical Service, Calcutta and London, 1845, in 8°.

coryza, and difficulty of breathing ; a fetid smell issues from the nasal fossæ, the voice is snuffling, there is headache (syphilitic ozæna), and warts are observed disseminated over the skin (Nidânasthâna, cap. ii.).” Nodes and buboes are mentioned in other passages, and hints are even given for the treatment of them.*

The history of the religious practices of India is another source of proofs of the antiquity of syphilis in that country. In fact, at the same time that the worship of Venus commenced in the centre of Asia (amongst the Assyrians [Pausanias]), that of Lingam, more in accordance with the egotism of human nature, began in India. But the myth of this worship, as related by Sonnerat (*Voyage aux Indes et à la Chine*), is fitted to explain, in an almost entirely satisfactory manner, the origin of syphilis. The portion of this myth which is of interest to us refers to the punishment of Civa, who had yielded to the allurements of pleasure ; his genital organs were destroyed by gangrene, which spread in the world by communication from women to men, and only ceased in consequence of the prayers of the penitent. According to F. C. Klein,† who relies upon the annals of Malabar, it is more than nine centuries since physicians first mentioned syphilis, and the cure of the disease by mercury. In early times, however, affections of the genital organs amongst the Indians were certainly very rare, since the Greeks‡ class them amongst the nations who lived very long on account of their temperance and of their climate, which was little favourable to the rise of diseases.

§ 2. *On syphilis amongst the Jews, the Greeks, and the Romans.*

The idea that syphilis might have existed from the earliest times having once been put forward, inquirers did not fail to examine even the sacred writings for traces of this disease, and the sagacity of the learned was exercised upon several passages of the Bible. The first of these passages relates to the plague of Baal Peor, which committed ravages amongst the Jews, in consequence of their participa-

* Transl. by Hessler, Vol. II. cap. xix. p. 124. See also H. Friedberg, Virchow's Archiv. für patholog. Anatomie und Physiol., Bd. xx. Heft 1, ch. 2, p. 254. 1864.

† *De morbi venerei curatione in India Orientali usitata.* Hafn. 1795. Tode, *Journ. de médec.*, Vol. II. livr. 2.

‡ Strabon, *Géogr.*, p. 1027 et 1039. See Ctésias, *Judic.*, 15. Lucien, *Macrob.* c. iv. Diod. Sic. XI. c. xl. Plin., *Hist. nat.* XVII. c. ii.

tion in the worship of that god; but in reality it is impossible to find anything* which affords a satisfactory explanation of the pathogenic conditions of this plague.

The vague indications of the thirteenth chapter of Leviticus, though doubtless indicating something different from leprosy, are, however, not more explicit. Neither do the nocturnal sufferings of Job, or the cicatrices and pus which covered his skin, call for serious criticism. Perhaps we might be called upon to attach more importance to the passage of Philo,† in which it is stated that circumcision was ordered to prevent a serious disease, difficult to cure, called *anthrax*, to which the uncircumcised were subject, if there were anything to show that the disease in question was really syphilitic chancre.

The old Greek physicians offer in their writings but few passages which relate in a positive manner to the history of syphilis; nevertheless, it might be possible to connect the following fragment of one of the books of Hippocrates with the epidemic of the fifteenth century ‡:—

"Many," says the father of medicine, "had aphthæ and ulcerations of the mouth, frequent fluxions of the genal organs, ulcers, tumours internal and external, and swellings in the groins. Moist, chronic, and painful ophthalmias; granulations on the inner and outer surfaces of the eyelids, which destroyed the sight of many persons, and which are called *fics*. The other sores and the genital organs were also the seat of numerous fungous growths. In summer were seen a great number of anthrax, and other affections which are called septic; also pustular eruptions and, in many, extensive vesicular eruptions."

Religious practices explain better, doubtless, the point of history with which we are occupied. The myth which arose on the occasion of the transplantation of the worship of Bacchus, and with it of that of Phallus, from India to Greece, is in fact furnished us by Natalis Comes in a manner to make us believe that even at that period affections of the genital organs were of a very serious nature.§ After

* See Numbers, chap. xv. verse 8, et chap. xxi. verses 16 et 17.

† See Bosquillon, in his translation of Bell's *Treaty*, t. ii. p. 48.

‡ *Œuvres: des Épidémies*, liv. iii. sect. iii. § 7; édit. Littré, t. iii. p. 85.

§ *Mythologia, sive explicationes fabularum*, lib. x. Francf. 1588, viii. p. 478.

having related that the Athenians had neglected to do honour to the images of Bacchus brought into Attica by Pegasus of Bœotia, the author adds: *Deus* (sc. Bacchus) *indignatus pudenda hominum morbo infestavit qui erat illis gravissimus*. Another myth related by the same author (*Lib. cit.* p. 528), and which has reference to the introduction of the worship of Priapus in Lampsacus, greatly resembles the former. Aphrodite, having been impregnated by Bacchus, during her journey in India, was delivered, on her return to Lampsacus, of Priapus; the latter, having remained in that city, was banished at a later period by the inhabitants, whose wives he had seduced. The gods, to punish them, inflicted upon them *gravissimum pudendorum morbum*, of which they were unable to get rid until they recalled Priapus. There is reason to believe that this myth did not arise until after the fact, and that the malignity of the disease produced the fable of the anger of the god, and of the cure of the disease by the intervention of the same god, when appeased. The ancients, in fact, had special recourse to the gods against wastings and other diseases of this kind. The following *ex-voto*, taken from the "*Priapeia*,"* plainly shows this belief in the intervention of the divinity for the cure of venereal diseases:—

VOTI SOLUTIO.

Cur pictum memori sit in tabella
 Membrum quæritis unde procreamur ?
Cum penis mihi forte læsus esset
Chirurigue manum miser timerem,
Dūs me legitimis, nimisque magnis
 Ut Phœbo puta, filioque Phœbi
Curatum dare mentulam verebar,
 Huic dixi; Fer opem, priape, parti
 Cujus tu pater ipse par videris:
 Qua salva sine sectione facta, &c., &c.

Whatever may be the truth of this story, it proves, at least, the severity of venereal affections at an early period, and indicates something more than simple gonorrhœa.

Amongst the Romans, affections of the genital organs are mentioned at length by physicians. Celsus, the oldest Latin medical writer, devotes an entire chapter to them, in which he establishes

* *Priapeia sive diversorum poetarum in Priapum lusos, &c., illustrati comment.* Casp. Scioppius, &c., Patavii, 1664, p. 45., Carmen xxxvij.

this important fact connected with the point we are now examining, viz., that, in his day, both physicians and patients spoke only with reserve of the private parts; whence it may be concluded that these diseases were ill observed, and consequently little known. It is not therefore an easy thing, says Celsus, for one who wishes to observe the rules of propriety without departing from those of art, to treat of these diseases.* And further on, this same author, describing the generality of the affections of the genital organs, adds that in phymosis, after having overcome the resistance of the prepuce, there are seen, when it is drawn back, ulcers situated either on its inner surface, or on the glans, or on the penis beyond the glans; these ulcers are either *clean and dry*, or *moist and purulent* (*ulcera pura siccaque et ulcera humida et purulenta*). But who does not recognise in this division the two varieties of hard and soft chancre accepted in our day? In other passages, he appears to allude to the other forms of chancre, the serpiginous and phagedænic: "*si vero ulcus latius atque altius serpit. . . . Occalescit etiam in cole interdum aliquid; idque omni pene sensu caret.*" Elsewhere, he speaks of ulcers of the mouth and nose,† and of the tonsils. Celsus also gives a brief description of four forms of impetigo and of two kinds of herpes, some of the varieties of which might well be connected with our subject. However, if the work of Celsus left any doubt as to the existence of the secondary affections, the same cannot be said of the following passage from Aretæus ‡:—"In some persons," says this writer, "the uvula is destroyed to the bones of the palate, and the fauces to the root of the tongue and epiglottis."

Primary local lesions and secondary affections appear, then, to have been observed from the earliest periods of Latin medical science. The successors of Celsus, it is true, have added little on the subject; but they have at least distinguished, like him, between *dry and clean ulcers*, and *moist and purulent ulcers*.§ Galen || and Ætius¶ moreover mention, the former, psoriasis scroti, a kind of

* *Traité de la médecine*, lib. vi. sec. xvij. trad. française de Fouquier, p. 372.

† Lib. v. sec. xxvij.

‡ *De causis et signis acutorum morborum*, lib. i. chap. viij.

§ Galen, *Méthod. méd.*, lib. v. chap. xv. P. Aeginetus, lib. iii. 59. Oribase, *Synops.*, ix. 37. Marcellus Empiricus, chap. xxxiii.

|| *Ibid.*, c. xx.

¶ *Tetrabiblos*, iv. serm. ii. chap. iii.

induration of the scrotum, complicated with itching, and sometimes with ulcers; the latter, *pustula spontanea in pudendis*, appearances which might well be considered secondary.

The sykos of the Greeks, or ficus of the Romans, which, according to Galen* and Oribasius,† is a moist ulcerating tubercle, of a round form, &c., presents an analogy with our mucous patches the more evident since this lesion was most frequently observed at Rome and Alexandria in men accused of sodomy.‡ Hippocrates appears to have pointed out this affection already under the name of *kiôn*,§ which, he said, emitted a bad smell.

More rarely do we find in ancient authors passages which can be regarded as alluding to tertiary affections. Plutarch, however, speaks of corrosion of the tibia, and Archigenes|| of certain pains in the periosteum, so deep-seated and continuous that the patient himself believed that the bones themselves were the seat of the pain. Galen adds that these pains were usually called *ostokopoi* (ostéocopic). In a passage of Marcellus Empiricus,¶ mention is made, moreover, of ulcerating and serpiginous affections of the tibia, *ulcera tibiæ quæ intrinsecus serpunt*, which do not appear to belong to any other disease than syphilis.

We confine ourselves to the above quotations, which might be much increased in number. It follows from them that the Greek and Latin physicians knew and distinguished several forms of local affection of the genital organs; and it cannot be denied that some of them (dry and moist ulcers) correspond to the two varieties of chancre which now occupy the attention of medical observers; neither, on the other hand, do secondary and tertiary affections appear to have been wanting. It was rather to the satirical poets than to the physicians that we are indebted for the knowledge of the contagiousity of the venereal affections of imperial Rome. The epigrams of Martial are of a truly surprising fertility, so much so, that the choice becomes difficult. The following passage, in which

* *Synops. méd.*, lib. v. c. iii. *Ætius, loc. cit.*, iv. c. xiv.

† *Synops.*, lib. vii. c. xl. *Ætius, loc. cit.*, et Paul, *Ægin.*, lib. iii. c. ii.

‡ Celse, vii. c. xviii. *Ætius, loc. cit.*, lib. ii. c. iii.

§ *De natur. mulierum*, Vol. II. p. 588. *De morbis mulierum*, lib. ii. Vol. II. p. 879; citation de Rosenbaum, p. 441. Halle, 1845.

|| Galen, *de Locis affectis*, ii. chap. viij.

¶ *De medicamentis*, chap. xxxiv.

Martial says that the debauchee Nævolus had communicated contagious sores to a young slave, is very striking,—

IN NÆVOLUM.

*Mentula quum doleat puero, tibi, Nævole, culus,
Non sum divinus, sed scio quid facias.**

Elsewhere the contagion of condylomatous excrescences is placed beyond doubt, in a family all the members of which are affected with a disgraceful sore,—

DE FAMILIA FICOSA (MART.).

*Ficosa est uxor, ficosus est ipse maritus,
Filia ficsa est, et gener atque nepos.
Nec dispensator, nec villicus, *ulcere turpi*,
Nec rigidus fossor, sed nec arator eget.†*

Martial further alludes to ulcers of the mouth and throat amongst debauchees, and to the alteration of the voice in sodomites,—

*Qui recitat lana fauces et colla revinctus
Hic se posse loqui, posse tacere negat.‡*

Dion Chrysostome§ also doubtless alludes to modifications of the voice consequent upon venereal disease when he exclaims, "They say that Aphrodite, to punish the women of Lesbos, has sent them a disease of the arm-pits; well, it is thus that the divine anger has destroyed the noses of the greater number amongst you, and hence has arisen this particular sound."

Whether mentagra and morbus campanus, diseases common amongst the Romans, were syphilitic or not, is a question difficult to solve. What may be said is, that morbus campanus, a disease peculiar to debauchees, and which left deep marks behind it, is not devoid of analogy with our syphilis, as the following passage from Horace proves,—

*. . . . at illi fæda cicatrix
Setosam lævi frontem turpaverat oris.
Campanum in morbum, in faciem permulta jocatus
Pastores saltaret uti Cyclopa, rogabat.||*

* *Epigram.*, lib. iii. n. 71.

† *Epigram.*, lib. vii. 71.

‡ *Ibid.*, lib. vi. 41.

§ *Orationes ex recensione*, J. Jac. Reekii, Lips. 1784, Vol. II. orat. 33.

|| *Sat.*, lib. i. v.

After having sought for traces of syphilis amongst the ancient nations of Europe and of Asia, we naturally ask ourselves whether this disease was not to be met with amongst the ancient inhabitants of America? Although more difficult and more obscure, this question is not, perhaps, altogether insoluble. Numerous observations, especially those of Prescott and Irving (*New York Journal of Medicine*, March, 1844), show that the Americans, far from having given syphilis to the Europeans, had rather received it from the latter, since this disease has been observed amongst them in proportion as their relations with us were more constant; but these observations, which are based upon particular facts only, do not prove that there did not exist amongst the original inhabitants of America tribes afflicted by the scourge of syphilis. The Abbé Bratteur de Bourbourg (*Histoire des nations civilisées du Mexique et de l'Amérique centrale durant les siècles antérieurs à Christophe Colomb*. Paris, 1857, t. i. p. 181) writes, in fact, that numerous original documents in the languages of the tribes of the valley of Anahuac, &c., have proved to him incontestably the existence of that disease (syphilis) in America prior to its discovery by Christopher Columbus. Reference is made to the apotheosis of Manahault and to his metamorphosis into a sun. The funeral pile is lighted, and he who will have the courage to throw himself upon it will deserve the honours of an apotheosis, for from his ashes will arise the god who will illuminate the universe. Manahault is there with the others, but he is ill, he is suffering from a terrible and incurable disease; there was nothing to induce him to cling to life, of which he had exhausted all the pleasures; but he still hesitates, and the others seek to give him courage. "It is for thee, they say, to save heaven and the earth." Manahault obeys this injunction, he throws himself into the flames, by which he is consumed in an instant. His disease, to which every tradition refers, decided him; and, since then, apparently, the terrible evil was, in a manner, deified with him. That which was most revolting in the limbs of this improvised god, the most abject matter assumed mysteriously the symbols of greatness and majesty. The words which express the most infect corruption of the human body, have still, amongst a great number of the Indian nations, a meaning analogous to the highest enjoyment. In all the Spanish traditions which relate to the history of that god, Manahault is constantly spoken of under the denomination of Buboso (the syphilitic one). The word Puz, which signifies the stinking and

corrupt matter of the sores of that personage (Pox in the Tzendah and Zotzile languages), became a verb to signify a sacrifice, a holocaust, and especially the sacrificing of human victims. *Galel-Ahpop* is a princely title, and *Galel-ya* is a syphilitic. *Tepcu* signifies a bad form of syphilis, or one who is much affected therewith; *Gagal-tepcual*, majesty generally and divine majesty.

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CHAPTER II.

SYPHILIS IN THE MIDDLE AGES. •

IN the Middle Ages, as in early times, syphilis is only mentioned in a fragmentary manner, so that we have to look for it partly in local changes in the genital organs, and partly in more general manifestations, described under the name of lepra.

The documents which show the existence of syphilis at this period, although already numerous, would be much more so if we were to examine a large number of manuscripts which have hitherto remained buried in the dust of libraries. Thus, in one of these manuscripts of the ninth century, Daremberg * has succeeded in discovering a passage in which it is impossible to misinterpret the mention of the connection between diseases of the anus and those of the genital organs. Ulcers of the genitals, in particular, were well described at this period, as well by the Arabian school † as by English, French, and Italian physicians.

Guillaume de Salicet, ‡ in the thirteenth century, in a remarkable work, heads one of the chapters, "*De corruptionibus, quæ fiunt in virga et circa præputium propter coitum cum meretrice vel fædo*;" Lanfranc de Milan, § some years later, speaks of excrescences on the prepuce, some soft, some hard, and adds:—"Ulcera veniunt ex pustulis calidis virgæ supervenientibus, quæ postea crepantur vel ex acutis humoribus locum ulcerantibus, vel ex commixtione cum fæda muliere, quæ cum ægro, talem habente morbum, coierat." Nevertheless it is to Valescus, of Tarentum, || that we owe the best description of chancres at the end of the fourteenth century:—"Ulcera et

• V. *Annales des maladies de la peau et de la syphilis*, t. iv. p. 275. Paris 1851-1852.

† V. Albucasis, Rhazès, Avicenna, &c.

‡ *Chirurgia*, lib. i. cap. xlvij. 1270.

§ *Practica seu ars completa chirurgiæ*, tract. iii. doct. ii. c. ii., et doct. iii. c. ii. *De ficu et cancro et ulcere in virga virili*.

|| *Philonium*, lib. vi. cap. vi. fol. 156. Venetiis, 1502. Voy. de plus: P. d'Argelata, *Chirurgia*. tract. xxx. cap. iii. Venetii, 1480.

pustulæ fiunt in virga quæ aliquando ratione malæ curæ et durationis fiunt cancrosum in tantum, quod aliquando perditur virga vel pars ejus, aliquando fiunt extra in pelle, aliquando ut plurimum intra : causæ possunt esse primitivæ ut est coitus cum fœtida, vel immunda, vel cancrosum muliere. . . . Vidi aliquos mori, quia tarde ad bonum parvenerunt medicum. *Virga enim erat circumdata toto ulcere cancrosum cum duritie, et erat rotunda sicut unus natus, et homo erat jam discoloratus et semimortuus.*

Who does not recognise in this passage the indurated chancre, the true syphilitic and not the soft chancre? The existence of this symptom during the Middle Ages is, then, little to be doubted. Many other writers of the same period describe ulcers resulting from an impure connection, and in which it is also possible to recognise primary syphilitic sores, or even certain secondary symptoms. On this point Roger,* Roland,† Théodoric,‡ Trotula,§ Arnould de Villeneuve,|| Guyde Chauliac,¶ Jean de Concorrège,** Gaddesden,†† &c., are worthy of consultation. Some lascivious poets, such as Villon‡‡ and Pacificus Maximus,§§ have equally alluded to the affections in question. As to secondary symptoms, not only do they exist, but they are distinctly described by some physicians. Such, at least, appears proved by a passage taken from a manuscript which, according to Littré,||| to whom we owe our knowledge of it, goes back as far as the thirteenth century. In a work without date, written by Gérard du Berri (*Glossulæ Geraudi*), quoted by Bernard de Gordon, Professor at Montpellier, we find, says Littré, in a chapter headed "*De ulceribus et apostematibus virgæ*," the following valuable passage :—" *Virga patitur a coitu cum mulieribus immundis*

* *Chirurgie*, tract. i. lvi. 65 (in *Collect. chirurg.* Venetiis, 1519).

† *Chirurg.*, lib. iii. cap. xxxi., *ibid.*

‡ *Lib. iii. cap. xxxviii.*, *ibid.*

§ *Curand. Ægritud. muliebr. libell.* Leipsick, 1778.

|| *Breviar.* ii., 29, opp. Lugdun., 1532, fol. 1776.

¶ *Chirurg.* tract. iv. doct. ii. cap. vii.

** *Pract. nov. med.*, tract. iv. cap. v. Venet. 1515, fol. 640.

†† *Rosa Anglica*, lib. ii. cap. xvii.

‡‡ *Œuvres de Fr. Villon*, édit. Formey, 1742, p. 149.

§§ Celebrated poet of fifteenth century. See Sanchez, *Apparition de la maladie vénér.*, p. 110. The poems of P. Maximus were published at Florence in 1489.

||| *Gaz. méd. de Paris*, 1846, p. note 931, on syphilis in the thirteenth century.

de spermate corrupto vel ex humore venenoso in collo matricis recepto; nam virga inficitur et aliquando alterat totum corpus." Although short, the latter part of the sentence is none the less definite: after having pointed out the infection of the genital organs, Gérard remarks that the whole body sometimes becomes affected.

Affections resulting from diseases of the genital organs appear also to have existed in the Middle Ages, but it is under the head of leprous diseases that we must look for them. In addition to the affections connected with lepra, and which belong rather to the domain of syphilis, a considerable number of facts, taken from the annals of the Middle Ages, give evidence of the existence, not only of chancrous lesions, but of syphilis itself. These facts, which relate chiefly to great personages of that period, are too voluminous to be given here, but have been collated, for the most part, in the work of Hermann Friedberg (*Die Lehre von den venerischen Krankheiten in dem Alterthume und Mittelalter*. Berlin, 1865, p. 88 *et seq.*) Consult also Corradi (Alfonso), *Caso di sifilide costituzionale nel trecento*. Milano, 1866, ii., and *Annales Univers.* cxclx. p. 40, gennaio. Contrary to what is observed in our days, lepra at that period was in fact a contagious disease, and consequently there is reason to believe that it was confounded with syphilis. Numerous writers assert the contagiousity of lepra.* One of them, B. Gordon,† relates the following curious fact:—"A certain countess, who had lepra, came to Montpellier, and I was called in to treat her for it. A bachelor of medicine, whom I had appointed to attend upon her, was unfortunate enough to share her bed: she became pregnant, and he leprous. Philo Schoff‡ relates a fact of the same kind. But more than this, lepra may result from an impure connection (*lepra ex coitu cum feda muliere*) . . . *et provenit etiam (lepra)*, says Bernard de Gordon (*ibid.*), "*ex nimia confubulatione cum qua jacuit leprosus.*" Michel Scotus § shows still more plainly the connection which exists between affections of the genital organs and the lepra of that period, when he

* Roger de Parma, Forestius, Paulmier, Valescus de Tarente, Thomas Gascoigne, &c.; V. Astruc, p. 77, t. i.; trad. franç. de Louis.

† *Lilii particula*, i. cap. xxii. Venetiis, 1496.

‡ *Libr. de lepra*.

§ De procreatione hominis physionomia, cap. vi. 1477. See also Mauardi de Ferrare, *Epistolæ medicinales*, 1525. Théodoric, *Chirurgia*, lib. vi. cap. lv.

writes :—" Si vero mulier fluxum patiatur et vir eam cognoscat, facile sibi virga vitiatur, ut patet in adolescentulis qui hoc ignorantes vitiantur quandoque virga, quandoque lepra."

J. de Gaddesden teaches us, on the other hand, that a woman who has had connection with a leper may communicate disease to the genital organs :—" Ille qui concubuit cum muliere, cum qua coivit leprosus, puncturas inter carnem et corium (scil. virgæ) sentit, et aliquando calefactiones in toto corpore, et postea frigus et insomnietates, et circa faciem quasi formicas currentes."

Thus we may assume that constitutional syphilitic symptoms were, in the Middle Ages, confounded with those of lepra,* a disease somewhat in vogue, and which covered with its name a large number of diseases. This view is, moreover, supported by the authority of eminent writers. Hensler conjectured that syphilis resulted from a degeneration of leprosy, and Sprengel partly adopted this view; both founded their opinion, not only upon the acknowledged fact that the atmospheric constitution may, under certain circumstances and at certain times, modify the character of chronic diseases to such a degree as to give them a truly epidemic character, but also upon the circumstance that several of the physicians who have written on the *French disease*, agreed in regarding it as the old lepra (especially saphati) disguised under a new and unusual form. This opinion, moreover, appears the more plausible, inasmuch as the time of the appearance of the epidemic of the fifteenth century is precisely that in which elephantiasis was observed to decline gradually in Europe. The following letter, addressed in 1488, by Pierre Martyr,† to his friend Arias Barbosa, who had informed him of his disease, not only leads us to think that syphilis existed before 1495, but also shows

* In the *Pratique* of M. Pierre Bocellin, of Belley, in Savoy, *Sur la matière de la contagieuse et infective maladie de lèpre*, Lyons, 1540, cap. ii., we read: Valescus de Tarente, Guy de Chauliac, Discus florentinus, assign three causes to lepra. The primary cause is double, i.e., it is either introduced into the belly of the mother impregnated at the menstrual period, or it comes from the *semen* of a leper. Inheritance is another cause. The author speaks, moreover, of hoarseness, snuffling, and factor of the breath.

† *Opus Epistolar.*, Petr. Martyris Anglerii Medianolensis, Amstelodami, typis Elzevir, 1670, in fol., 2 col., liv. i. chap. xlviii. p. 34. The first edition of these letters, now rare, appeared at Alcala de Henares in 1530.

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the perfect analogy which exists between the French disease and elephantiasis. "You write me," he says, "that you are affected with a particular disease, called *bubas* by the Spaniards, *galico* by the Italians, elephantiasis by some physicians, and in various ways by others. You describe with incomparable elegance your evil, your losses, the uneasiness in your joints, the weakness of your ligaments, the excruciating pains in your articulations, and lastly, the ulcers and the fœtor of your breath. I pity you, dear Arias, &c.—*Giennio in nonis Aprilis*, 1488."

From these documents it results, then, that the physicians of the Middle Ages, like those of antiquity, recognised the manifestations of syphilis, but not syphilis itself. The link which connects the primary sore with the consequent symptoms had escaped them. Can we be astonished at this, when we remember that only within a few years we have recognised the relation between primary and secondary lesions and the visceral affections, previously described and treated under the name of cirrhosis, softening of the brain, &c.?

The progress made latterly we shall soon see completed altogether, as far as regards secondary affections. From that moment the nosological conception of syphilis will have become established.

CHAPTER III.

 EPIDEMIC OF SYPHILIS AT THE END OF THE FIFTEENTH CENTURY.
 —SYPHILIS OF THE "RENAISSANCE" PERIOD.

Most of the physicians and historians of the end of the fifteenth century agree in signalling the appearance of a new disease; but they do not agree either as to the date or the place of its birth. According to Fulgosi,* two years before the expedition of the French against the Neapolitans, in 1492 therefore, the world was attacked by a new disease. Pomarus† bears witness to the appearance of this disease in Saxony in 1493.

We read in Sprengel‡:—"At the commencement of the summer of 1493 this new disease already existed in Auvergne, and at the same time in Lombardy. In the summer of 1493 it showed itself at Halle, in the Mark Brandenburg, at Brunswick, and in Mecklenburg." Sciphoever§ relates that it broke out in 1494 in Westphalia, whence it soon spread upon the coasts of the Baltic, in Pomerania, and in Prussia. According to Linturius,|| it manifested itself, in 1494, in Suabia, on the banks of the Rhine, in Franconia, and in Bavaria. A decree of the Parliament of Paris, issued in 1496, prescribes various measures to be taken against a disease called the *grosse vérole*, which for two years had been very prevalent in that kingdom. Lastly, Pintor¶ relates, according to Chinchilla,

* *De dictis factisque memorabilibus collect.* Milan, 1509.

† *Chronica der Sachsen und Niedersachsen*, t. ii., 1496.

‡ *Essai d'une histoire de la Médec.*, trad. franç. Paris, 1810, t. ii. p. 564.

§ *Chronica Archieomit.* Oldenburg, dans Meibomius, *Script. rerum German.*, t. ii. p. 188.

|| *Append. ad fascicul. tempor.*, dans Pistorius, *Script. rer. Germ.*, t. ii. pp. 106, 108, 110.

¶ Rengifo, thèse de Paris, 1863. See also, on the appearance of the disease at Rome. Steph. Infessura, *Diarium urbis Romæ*, dans Eccard, *Corpus histor. med.*, t. ii. p. 2012. Delphini, *Epistol.*, lib. xii., in fol.; Bacchardi, *Diary curiæ romanæ sub Alexandro VI.*, dans Eccard, *loc. cit.*,

that the epidemic of syphilis broke out at Rome, in the month of March, 1494, after the entrance of the sun into Aries.

The disease in question, regarded as a new disease, existed therefore, and even spread over the greater part of Europe, before the year 1495. That fact being accepted, is it any longer necessary to discuss the *American origin* of syphilis? On the other hand, can the French be accused of having carried this disease into Italy, when Charles VIII. did not start from Vienne, in Dauphiné, until August 23rd of the year 1494? By no means. It must be acknowledged, nevertheless, that it was at the siege of Naples especially that the new disease found the conditions most favourable to its development, for from that moment it attained a degree which it had never reached before.

Sabellicus* relates that a new kind of disease began to spread throughout Italy about the time of the first invasion of the French, *i.e.*, in 1495; and on this account probably it was called the *French disease*. After great sufferings, the body became infested with pustules, which degenerated into malignant ulcers, and disfigured it excessively. Few died of it, considering how many were affected, but still fewer were entirely cured; and not only Italy was subjected to this scourge, but also Germany, Dalmatia, and all parts of Macedonia and Greece. Almost a twentieth of the whole populations suffered from this disease.

Physicians, equally with historians, admit that a new disease spread in Italy, or even in other countries, at the period when the French went to besiege Naples.† The numerous records which they have left of this great epidemic enabled Fracastor to draw a faithful picture of this disease, copied chiefly from the descriptions of Grundbeck, Leonicens, 1497; Gaspard Torella, 1500; Jacques Catanée, 1505; J. Almenar, 1510, and many other contemporary writers. The picture furnished us by Fracastor is worthy of repro-

t. ii. p. 201. Sarrazini observes that this plague raged at Ancona in the course of the same year, 1494. *Notizie istor. del. cit. Ancona*. Rome, 1675, in fol.

* M. Coccius Sabellicus, *Rhapsod., Enn.*, x. lib. ix. Venetiis, in fol., 1502, Paris, 1509. See also Guichardin, livre ii., de son *Histoire*; J. de Boudigné, *Thèse agrégative des Annales et Chronique de l'Anjou*. Paris, 1529, Part iii. p. 1801.

† See Joseph Grundbeck ou Grundpeck, *De pestilentia scorra sive mala de Frantzis*; Alex. Bénéit, de Vérone, attaché en qualité de médecin à l'armée vénitienne, défaite à Fornoue; Coradin Gilini, *Opusculum de morbo*

duction; it affords us an exact knowledge of the syphilis of that period. "In some persons," says that physician,* "the disease commenced without contagion; in others, and these were the greater number, it was transmitted by contagion. Not every kind of contact sufficed for producing it; it required that two bodies should become heated together, as occurs in the act of coition. And it was chiefly by coition that the greater number became infected. However, a considerable number of children contracted the disease by sucking their diseased mothers or nurses. The disease was not communicable at a distance; it did not show itself immediately, but sometimes at the end of one, two, or even four months; certain signs, however, announced already that the disease was in the germ.

"Those affected were sad, weary, and cast-down; they were pale; most of them had sores on the genital organs, ulcers similar to those which are wont to develop themselves on those organs after coition, and which are called caries, but of a very different nature; they were obstinate. When they were cured in one place, they appeared in another, and the treatment had to be recommenced. Afterwards, pustules arose on the skin, covered with a crust; in some they appeared upon the head, which was the most frequent place; in others they appeared elsewhere. At first they were small; afterwards they increased to the size of an acorn, which they resembled in shape, their appearance otherwise being similar to the crusta lactea of children. In some cases these pustules were small and dry. In others they were large and moist; in some livid; in others whitish and rather pale; in others hard and reddish. They always broke in a few days, and constantly discharged an incredible quantity of stinking matter as soon as open; they were so many true phagedænic ulcers, which destroyed not only the flesh, but even the bones. Those attacked in the upper parts of the body suffered from malignant affections, which eat away sometimes the palate, sometimes the fauces, sometimes the larynx, sometimes the

gallico; Barthélemi Montagnana, le jeune, de Padoue (conseil médical à Pierre Zeno); Nicolas Leonicensi de Vicence (*De morbo gallico*, 1497); Gaspard Torella (*De dolore in pudendagra*, 1500); Antonio Benivenio (*De abditis rerum causis*. Florence, 1507); Wendelin Hock de Brackenaw, *De morbo gallico*, cap. i.; Jacq. Catanée, *De morbo gallico*; Pierre Tropolinus, *Traité de la vérole*; Jean de Vigo, *Pratique de chirurgie*, lib. v. chap. i., and many other authors mentioned by Astruc, *loc. cit.*, pp. 113 et 122.

* Fracastor, *De morbis contagiosis*. Venetiis, 1546, lib. ii. cap. i.

tonsils; some lost the lips, others the nose, others all the genital organs. Many had gummy tumours on the limbs, which disfigured them, and were often of the size of an egg, or of a small loaf; when they broke, a kind of white mucilaginous fluid flowed from them. They attacked chiefly the arms and legs; sometimes they remained callous until death.

“But, as if all this were not sufficient, there ensued, moreover, severe pains in the limbs, often at the same time with the pustules; sometimes before, sometimes after them. These pains, which were persistent and unbearable, were chiefly felt in the night, and were seated in the limbs themselves, and in the nerves rather than in the joints; some, however, had pustules without the pains, others pains without the pustules; most had both pustules and pains. However, all the limbs were in a languid condition; the patients were wan and emaciated, without appetite, sleepless, always melancholy and ill-humoured, and anxious to remain in bed. Their faces and legs swelled, and a slow fever sometimes supervened, but rarely. Some suffered pains in the head, which were persistent, and did not yield to any remedy. If blood was drawn, it was found to be pure, and somewhat mucous; the urine was thick and red; by this sign alone, supervening in the absence of fever, the disease might be recognised; the stools were liquid and mucous.

“Such were the symptoms of the disease at its commencement; but I speak of a past time, for now, although the disease is still prevalent, it nevertheless appears to differ from what it was then. We have seen, during about the last twenty years, fewer pustules and more gummy tumours, which is the reverse of what was observed in the first years. The pustules, when any appear, are drier, and the pains, when any supervene, more severe. Within about six years the disease has again changed notably; we now see pustules in but very few patients; scarcely any pains, or much slighter ones, but many gummy tumours.

“A circumstance which has astonished everybody is the falling off of the hair of the head and other parts of the body, which produces a ridiculous appearance; some have no beard, some no eyebrows, some are bald. At first these results were attributed to the remedies, especially to mercury. Now it is still worse: in many the teeth become loose, and in many they even fall out.”

Such is the picture, somewhat too darkly coloured perhaps, which Fracastor has left us of this famous epidemic, which had already,

when that author wrote, lost much of its intensity. Like Fracastor, Guichardin and Ulrich de Hutten acknowledge the mitigation of the venereal disease, and it would even appear from their account that it did not retain its pestilential character for more than seven years.

Most of the syphilographers of the sixteenth century are unanimous concerning the time of the decrease of syphilis. Vidus Vidius,* Ant. Musa Brassavole,† François Lopez de Gomora,‡ G. Fallope,§ Bernardin Tomitano,|| Levinus Lemnius,¶ Alex. Trajan Petronio,** Mercurial,†† Laurent Joubert,‡‡ Jean Varandé,§§ André Césalpin,|||| Epiphane Ferdinand,¶¶ Alexandre Déodat,*** J. S. Velschius,††† J. Winell,‡‡‡ Thomas Sydenham,§§§ Jean Deveaux,||||| record that towards the middle, or at least towards the end, of the sixteenth century, the epidemic form of syphilis had disappeared, and that chiefly in the places of its greatest intensity.

We are now acquainted with the different phases of the great epidemic of the fifteenth century, as they are described by contemporary writers. That this epidemic was of a syphilitic character can scarcely be doubted. Certain authors, however, believed that they

* *Curation des maladies en général*, sect. ii., liv. iii. Florence, 1594; Francfort, 1596, in fol.

† *Tractatus de usu radicis chinæ*, &c., in Aloysi Luisini *de morbo gall.*, &c. Venise, 1566, 1567.

‡ *Histoire générale des Indes*, 1553.

§ *De morbo gallico tractatus*. Padoue, 1584, in 4°; Venise, 1585, in 8°.

|| *De morbo gallico*, liv. ii. p. 2.

¶ *De occultis naturæ miraculis libri duo*, lib. ii. cap. iv. Anvers, 1559, in 12°; trad. franç., Paris, 1567, in 8°.

** *Traité de la vérole*, liv. ii. chap. xxii.

†† *Traité de la vérole*, chap. ii. Citation de Astruc, p. 357.

‡‡ *De variola magna sive crassa*, cap. iii. et *Erreurs populaires*, &c. Bourdeaux, 1570, in 8°.

§§ *Tractatus de lue venerea et hepaticæ*. Genève, 1620, in 8°; Lyon, 1658, in fol.

|||| *Praxis universæ artis medicæ*. Trévise, 1606, in 8°.

¶¶ *Centum historiæ seu observ. et casus medici* (obs. 17). Venetiis, 1621, in fol.

*** *Valetudinarium*. Leyde, 1660.

††† *Recueil de curationes et d'observations médicales*, obs. 175, cité par Astruc.

‡‡‡ *Traité de la vérole*, cité par Astruc.

§§§ *Epist. secunda responsoria, de lue venerea*. Londres, 1680, in 8°.

||||| Notes added to the French translation of the Latin treatise by Charles Musitan, *Sur le mal vénérien*, chap. iv. liv. i. Trévoux, 1711.

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saw in it diseases variously combined; others denied its specific origin, and thought that they had to do with quite another disease, typhus (Cazenave), glanders, farcy (Ricord, Beau, &c.).

It does not enter into our plan to analyse these various opinions; the best means of refuting them is to prove that the epidemic of the fifteenth century is not unique of its kind, and that since that period there have been observed several endemo-epidemics, evidently syphilitic, or at least very analogous to that epidemic.

The comparative study of these endemo-epidemics, which constitute, in all respects, a part of the historical domain of syphilis, fits in here quite naturally. A comparison of them will permit, moreover, of better seizing the resemblances of each of them. The topographic description, which will follow, by showing that, even in our days, when it comes to develop itself under special conditions, syphilis puts on a thoroughly malignant character, will render more evident the similarities between the epidemic of the fifteenth century, those which followed it, and certain cases of syphilis in our own times.

CHAPTER IV.

ENDEMO-EPIDEMICS OF SYPHILIS SUBSEQUENT TO THAT OF THE
FIFTEENTH CENTURY.

DEPRIVED of its epidemic character before the middle of the sixteenth century, syphilis, spread over a large portion of the surface of the globe, continued to prevail with moderate intensity and in a simple and benignant form. Under certain circumstances, however, it is seen suddenly to extend to a great number of persons, and to assume a more acute type. It is thus that it appeared in 1578, at Brünn, in Moravia, in a locality where the peasants are much addicted to good living and the use of spirituous liquors.

§ 1. *The disease in Brünn.**

This epidemic, without being very fatal, was accompanied by most alarming symptoms. In less than two or three months, 180 persons were attacked by it in the town or suburbs, and many of the country people were equally affected. The cause of it was attributed to the waters of the baths, the inhabitants being in the habit of bathing on a certain day and of having blood drawn by cupping, and it was believed to have commenced on Saint Luce's Day, a festival celebrated with pomp in the town. Those who had bathed and been cupped on that day were observed to have contracted it. It did not become developed, however, until one or two weeks, or even a month, after that period. The Senate caused the bathing establishment to be closed, and the disease, which had become mitigated during the winter, disappeared towards the vernal equinox.

After a certain period of unusual lassitude, inflammation and

* Thomas Jordan, *Brunno Gallici seu Luis novæ in Moravia exortæ descriptio*. Francfort, 1578, 1580. Sporisch, *Idea Medici*, &c. Francfort, 1582. Crato, in Scholz *epistol.* Hanovre, 1610, 242. Ozanam, *Hist. méd. des épidémies*, t. v. p. 277. Paris et Lyon, 1823. Jeitteles, *Prag. Vierteljahrsschrift*, lxxix. p. 49.

sanious ulcers appeared on the places where the cupping-glasses had been applied. It was a singular circumstance that, notwithstanding the great number of cupping-glasses applied, one or two only became the seat of ulcerations. In some, the whole body was afterwards covered with pustules, which rendered the face deformed and horrible. During the progress of the disease, callosities supervened upon the head, which, on bursting, discharged a viscous fluid, like turpentine. Severe pains were then felt in the arms, shoulders, lower extremities, and especially in the tibiae, where those bones are covered by periosteum only. The pains increased at night and diminished in the morning. Next followed prostration of strength, stupidity, and even mental aberration. A fœtid discharge flowed from the nostrils, the appetite was lost, and the patients wished for solitude. Bitters, decoction of guaiacum, and turbith mineral were the chief remedies employed; the ulcers were dressed with mercurial ointment.

§ 2. *Pian*.—*Yaws*.—*Frambœsia*.

Hans Sloane, Voyage aux îles de Madère, la Barbade, Saint-Christophe, la Jamaïque, &c. Londres, 1705, 1725. *Bontius*, Medicina Indorum, cap. xix. Lugduni Batavorum, 1718, 94. *Labat*, Nouveau Voyage en Amérique, 1722, 6 vols. in 12°, 10, 358. *Winterbottom*, Account of the nat. Africans of Sierra Leone, vol. ii. chap. viii., 1742. *John Hume*, A description of the African distemper called the yaws, &c. Med. Essays and Obs. by a Society in Edinburgh, vol. v. post ii. p. 87, 1742. *Dazille*, Observations sur les maladies des nègres, 2 vols. in 8°, Paris, 1742. *Allamand*, in Nov. act. natur. curios. Academ. Leopold IV., 88, 1742. *Hillary*, Observations on the changes of the air and the concomitant epidemical diseases in the island of Barbadoes. Londres, 1759, in 8°. *Desporte*, Histoire des maladies de Saint-Domingue. Paris, 1770, ii. 61, 65. *Bancroft*, An essay on the nat. hist. of Guiana, in 8°. Londres, 1767. *Schilling*, Diatribe de morbo yaws dicto. Utrecht, 1770, in Schlegel Thesaur., ii., part i. 217. *Boyle*, Account of the west coast of Africa, 387, 1773. *Jacq. Bruce*, Travels to the sources of the Nile, iii. 36, 1773. Traduct. franç. par Castéra, 1790, 5 vols. in 4°. *Arthaud*, Traité des pians au Cap-Français, in 4°, 1776. *Bajou*, Mémoire pour servir à l'histoire de Cayenne et de la Guyane. Paris, 1777, 1778. *Peyrilhe*, Précis. théor. et pratique sur le pian et la maladie d'Amboine. Paris, 1783. *Swedjaur*, Practic observ. on venereal complaints. Edinb., 1788, p. 248. *Ludford*, Dissertat. de Frambœsia. Edinb., 1791. *Nisseaus*, Spec. de nonnull. in colon. Surinam. observ. morbis. Harderov, 1791. *Hunter*, Remarques sur les maladies des troupes anglaises dans la Jamaïque, trad. allemande. Leipsick, 1792, 229. *Rodschied*, Med. und chirurg. Bemerkungen über Rio Essequibo. Francfort, 1796, 226. *Sprengel* (K.), Beiträge zur Geschichte der Arzneikunde. Halle, 1796, Vol. I. fasc. iii. Cet auteur

s'attache à séparer le yaws du pian. *Kunsemuller*, Spec. de morbo yaws, &c. Halle, 1797. *Camper*, Traité pratique des maladies des pays chands, 1802. *Savaresy*, De la fièvre jaune, &c. Naples, 1809, 92. *Corneiro*, in Rivist. med. flumin., 1835, No. 3, et 1836, No. 23. *Mason*, in *Edinb. Med. and Surg. Journal*, xxxv. 52, 1831. *Rankine*, *ibid.*, xxviii. 283. *Maxwell* Observations on yaws, &c. *Edinb.*, 1839. *Levacher*, Guide Méd. des Antilles, &c., 2^e édition. Paris, 1840, 278. *J. Thomson*, Observat. and Experim. on the nature of the morbid poison called yaws, &c. In *Edinb. Med. and Surg. Journ.*, 1819, t. xv. 321, et 1822, t. xviii. 32. *Waitz*, On diseases incident to children in hot climates. Bonn, 1843, 282. *Fox*, in Wilkes' Narrative of the U. S. Explor. Exped. Philad., 1845, iii. 316. *Ferrier*, in Répertoire général d'Anatomie et de Physiologie pathologique, iv. 170, 18. *Baudoin*, Gazette Médicale de Paris. *Furnari*, Voyage médical dans l'Afrique méridionale. Paris, 1845. *Bryson*, Report on the climate and diseases of the African station. Londres, 1847, p. 260. *Duncan*, Travels in Western Africa. Londres, 1847, ii. p. 96. *Pruner*, Die Krankheiten des Orients. Erlangen, 1847, p. 174. *Rendu*, Etude topographique et médicale sur le Brésil. Paris, 1848. *Heymann*, Darstellung der Krankheiten in den Tropenländern, p. 219. *Lemprière*, in Pinkerton Collect. of Voyag., xv. 689. *Löffler*, in Beiträge zur Arzneiwissenschaft, &c., i. *Nielen*, Verhandl. der Weese ch., &c. Haarlem, xix. 135. *Oviedo*, Hist. gener. y natural de las Indias, lib. ii. caps. 13, 14. Tolède, 1535. *Paulet*, in Arch. génér. de Médecine, août, 1848, p. 385. *Ritchie*, in Monthly Journ. of Med., mai, 1852. *Guyon*, Recueil de mém. de méd. militaire, xxix. 159, et Gaz. médicale de Paris, 446, 1853. *Dumontier*, in Nederlandsch Lancet, Sept., 1855. *Gomez*, in Mémoires de l'Académie des Sciences de Lisbonne, iv. i. *Rochoux*, in Journal de Physiologie, No. 4. *Sigaud*, Du climat et des maladies du Brésil, &c., 117-375, et Ann. des malad. de la peau, t. ii. p. 83. Paris, 1846.

The names yaws, pian, frambœsia, serve to indicate in different countries a disease, the unity of which, in spite of some opposite opinions, is now generally recognised, and which, like the foregoing epidemic, appears to belong to the domain of syphilis. Pointed out as early as the tenth century by the Arabian physicians, who gave it the name of Sahafati,* this disease, which attacked chiefly the negro race, has only really been made the object of serious study since the observations of Pison† were published.

It is met with from the left bank of the Senegal River to Cape Negro, in Senegambia, Congo, Sierra Leone, Nigritia, and most of the colonies to which negroes are carried, especially in the

* Théodoric, lib. viii. cap. xviii. Venetiis, 1492, 57. *Hirsch*, Geogr. Path., p. 784.

† Pison, De Medecina Brasiliensi, lib. ii. cap. xiv., 1648, in fol.

European States & America in the studies of John Worrall, and the works of John Hunter. It is observed, however, amongst the Indians of North America that if the females have nearly exhausted the quantities of milk and exhausted means of the milk and cast it away, and still have their breasts the whites.

The same matter is a case of disease and weakness, being in the same symptoms even, especially in children, and generally presents the same kind of symptoms. These afterwards appear in the different regions of the body in small little red pimples: in some, papules and pustules which soon become covered with ulcers, crusts, beneath which there are more or less extensive ulcers. These ulcers which proceed with continuous constant ulcers, in which after a time the name of pian, are sometimes raised, bleed at the slightest touch, and are followed by a scar. After pian is observed, amongst other lesions, the affection of the bones characterized by swelling, redness, pain, tenderness, &c.

These various symptoms, and many others are numerous in connection are evidently not wanting in analogy with those of syphilis; but that which proves above all, the identity of the nature of these morbid conditions and the necessity of classing them with each other, is the mode of their propagation.

Like syphilis, pian is contagious. Several negro children having been taken from an elevated spot near a sugar plantation, where they were placed with other children with whom they took their food, three of them were attacked seven weeks later, by fever, tenderness, and a general eruption: the others fell sick at the end of ten weeks, and all were restored to health at the end of the eighth month (Thomson).

"I shut up," says Paillet, "in a room to which no one else had access, twelve children born of diseased parents: their nurses were not affected with pian, their own health was particularly good, and yet in three, four, and seven months these children had pian, and some time after, in an interval of from two to six months, the nurses also became affected. This fact proves not only the contagiousity, but also the hereditary transmission of pian. Thirty adult negroes presented," adds the same author, "a well-marked eruption, twenty-five to fifty days after having had connection with negresses whom I had examined, and in whom I had found tubercles upon the abdomen, chest, and inner part of the thighs."

is also transmissible by inoculation, as proved by the expe-

riments of Thomson and Paulet. A child was inoculated at five points with matter taken from pustules, the crusts of which had been removed. Three of the punctures healed; the other two, after having had for three weeks the appearance of slight excoriations, changed into small ulcers, which soon became dirty and uneven. Seven weeks after the inoculation, numerous pustules appeared on the forehead, then on the rest of the body, and the disease lasted nine months altogether. A young negress, who had been inoculated with variola, furnished matter for the inoculation of another child. Shortly after the operation, she confessed that she had yaws . . . ; the child inoculated had small-pox mildly; but at the end of two months yaws showed itself, and ran its ordinary course. Blood from this subject, inoculated in two cases, did not produce any symptoms, however (Thomson).

Hunter, in his treatise upon venereal diseases, relates the fact of inoculation occurring accidentally in a physician.

Paulet writes:—"I made several punctures, with a lancet dipped into the discharge of pian, in the inner part of the thigh of four healthy subjects. They produced no result at the spot where the instrument had been applied; but from twelve to twenty days after, a characteristic eruption appeared on the forehead, chin, arm, and abdomen. In six other experiments, the eruption commenced at the point of puncture, and afterwards ran the same course as in the preceding cases." "During some minutes," adds the same observer, "on two successive days, I made friction with a pledget of lint steeped in the same fluid, on the inner part of the arms of three young men of seventeen, in perfect health, and on the twentieth day the transmission of the disease was evident. It is incontestable, therefore, that pian is transmissible by direct inoculation, by the application of the discharge to an excoriated part of the skin; it is communicated, further, by sexual intercourse, by suckling, by kitchen utensils, and doubtless by other means (small-pox inoculation). It is an hereditary disease, which develops itself in children in from three or four to seven months. The opinion generally adopted is, that it is only contracted once (Nielen, Peyrilhe, Rankine, Levacher, Hillary, Hunter, Savaresy, Paulet, Bajon, Segond, Dumontier, Thomson). In all these respects, therefore, pian does not differ from syphilis; but the treatment serves further to show the relation between these two diseases, since the remedies most beneficial in the latter are also those best suited for combating the former.

§ 3. *Sibbens of Scotland.**

The sibbens, or sewens, a disease peculiar to the west of Scotland, and especially to the counties of Galloway, Dumfries, Wigton, Ayr, &c., first began to be observed towards the end of the seventeenth century (1694), at which period, according to some writers, it was imported by the soldiers of Cromwell. It is an hereditary and contagious disease, and is communicated by means of drinking-vessels, or towels, by suckling, by sleeping with a person affected, and by coition (Wills, Swediaur). It presents itself in the form of buboes, nodes, ulcers which occupy by preference the throat, the mouth, and the genital and anal regions, affections of the bones which, as in the case of the foregoing diseases, are curable by mercury. But that which especially characterises this disease and links it to the syphilis of the fifteenth century, and to pian or yaws, are the spongy or fungous excrescences which appear upon the skin, wherever there is the least spot, excoriation, or ulcer. From the resemblance of the excrescences to the fruit of the wild raspberry of the country, called, in the Celtic language, "swin," comes the name swinn, sibbens, or sewens, which has been given to this disease, now rapidly decreasing, if not already quite extinct.

§ 4. *Radesyge of Sweden and Norway.*

Arbo, Afhandl. om Radesygen, Kjobenh, 1792. *Maugnr*, Unterrett om Radesygenskjendetega, &c. Kjobh., 1793. Ces deux ouvrages ont été traduits en allemand par Hensler. Altona, 1797. *Möller*, in Tode's Journ., v., Heft i., Munk, *ibid.* *Sammandrag* of Berattelser . . . om vener. sjukdom, &c. Stokh., 1813. *Bæcker*, in *Edinb. med. and surg. J.*, v. 420. *Cederschjold*, Juledn. till. en närmare Känned., &c. Stockholm, 1814. *Charlton*, in *Edinb. med. and surg. J.*, xlviii. 101. *Pfefferkorn*, Ueber die norw. Radesig. und Spedalsked. Altona, 1797. *Mülertx*, Bidrag til Opløsning om radesygens Natur og Laegemaade. Kopenhagen, 1799.

* B. Bell, *Traité des maladies vénériennes*; transl. by Bosquillon. Paris, 1802. Blair, *Miscell. observat.*, in *The pract. of physic*, &c. London, 1718. Craigie, *Elements of the pract. of phys.* Edinburgh, 1836, i. 681. Faye, in *Norsk. Mag. for Lægevidensk.*, 1, 2. Freer, *Diss. de syphilitide venerea*. Edinburgh, 1767. Gilchrist, in *Physical and literary essays*. Edinburgh, iii., 1771, 177. Hill, *Cases of Surgery*. Edinb., 1772. Skene, in *Monthly Journ.*, 1844, June, 615. Wallace, in *Behrend's Syphilidologie*, 31, 475. Wills, *ibid.*, April, 282. Ozanam, t. v. p. 311, 1823. Swediaur, *Traité des maladies vénériennes*, traduct. franç. Paris, 1801, p. 370.

Ahlander, Dissertatio de morbo cutaneo, luem veneream consecutivam similante. Upsala, 1806. *Holst*, Morbus quem Radesyge vocant, &c. Christiania, 1817, in *Hufeland Journ.*, xlix., Heft 4, 96. *Vought*, Dissertatio sist. obs. in exanthem. arcticum, vulgo Radesyge dictum. Gryswalde, 1811. *Osbach*, Exposé de la méthode pour guérir les maladies vénériennes dégénérées. Stockholm, 1811. *Gedike*, Diss. de morbo quem Radesyge vocant. Berolini, 1819. *Græfe*, in *Ejd. Journ.*, xxix. 480. *Hebra*, in *Wien. medic. Wochenschrift*, 1852, No. 48, und *Zeitschrift d. Wien. Aerzte*, 1853, 60. *Hedlund*, in *Svensk Läk. Sällsk. Handl.*, v. 176. *Hjalalin*, Diss. de Radesyge. Kiel, 1839. *Hjort*, in *Eyr ii.* 209, und *Norsk. mag.*, i. 1. *Hunefeld*, die Radesyge, &c. Leipsick, 1828. *Huss*, Om Sverg, end. sjukd. Stockholm, 1852, 10, 33, 43. *Danielsen et Boeck*, Traité de la Spedalsked. Paris, 1848. *Kiernulf*, in *Hygiea*, xii. 173. *Frøbelius*, in *Petersb. med. Ztch.* ii. 1862. *Boeck*, in *Norsk. magaz. for Lægevidensk.* ii., Raek. vi. et *Deutsch. Klinik.* 1853. *Hjort*, *ibid.*, xv. 5, p. 527.

The radesyge of Sweden and Norway, a disease which, in Scandinavia, is what the sibbens is in Scotland, has in recent times been made the subject of profound study by Hjort in Norway, and by Kjerrulf and Magnus Huss in Sweden. Still more recently, Professor Boeck, of Christiania,* has published, concerning this question, a treatise remarkable for the number of its references, in which, after having pronounced against the opinion of the physicians who asserted the identity of syphilis and radesyge, he concludes by admitting that these two diseases are not different.

In 1758, Honoratius Bonnevie, having received orders to proceed to Egersund and Stavanger, to investigate a new disease prevailing in those towns, learned that this disease was entirely unknown there until 1710, when a Russian vessel came to pass the winter near Stavanger. Two Norwegian women sometimes went on board to visit the Russians; they returned with ulcers upon the genitals which prevented them from walking. At the same time, their throats and other parts of their bodies were affected. The peasants, observing this disease, called it *radezyge*, which signifies, in Norwegian, foul disease.

This disease increased in extent from 1750 to 1760; but its greatest development only dates from the end of last century, when, according to Maugor, it was met with in all parts of Norway, but chiefly on the coasts, and especially at Bergen and Christiania. In

* *Traité de la Radesyge.* Paris and Christiania, 1860.

opposition to Dr. Cron, who declared the disease to be of venereal origin, Maugor identified it with *spedalsked*; but in the facts which this observer records we easily recognise syphilis. At that time, moreover, mercury constituted, in general, the basis of the treatment. Steffens, summoned to study and treat the disease on the spot, recognises in it two forms of affection: one which is *spedalsked*, the other *radesyge*, properly so called. In the latter, the patient has ulcers in the throat; in many individuals the uvula is destroyed, in others there are fleshy excrescences about the anus and genital organs; indurated glands are seen, generally, on various parts of the body; severe pains are felt in the joints; the bones of the nose are carious. Hans Munk takes a very similar view, viz., that *radesyge* includes—1st, syphilis insontium, or *sibbens*; 2nd, *spedalsked*, and all the malignant plagues.

Professor Sorrensen, who does not consider *radesyge* to be of a syphilitic nature, sums up, nevertheless, as follows, the symptoms of this disease:—

“Pains in the head and limbs, especially during the night; herpetic eruptions on the forehead, chest, shoulders, and arms; slight inflammation of the throat. The herpetic eruption becomes more extensive, and acquires a raised margin. It shows itself on the face, in patches, at first superficial, which gradually become deeper; subcutaneous tubercles are formed, which pass into a state of inflammation and suppuration. The inflammation of the throat increases; there is ulceration of the uvula and tonsils, which extends to the pharynx; similar ulcers appear in the region of the palate; the palate bones are attacked and destroyed. On the limbs appear ulcerations with dark red edges, sometimes covered with a thick dry crust. On the genitals, anus, and perineum are developed condylomata and excrescences which extend to the thighs. The disease attacks the septum of the nose, which ulcerates and becomes perforated; there is caries of the osseous system, especially of the bones of the nose, the long bones, and the frontal bones; tophus and exostoses are observed, which soon change to caries. The primary cause of the disease is unknown; all that is known is that a *contagium* is developed which is communicable by means of the saliva, the perspiration and ichor, knives, spoons, and clothes, as well as by contact. Mercury is the first and most important of all the remedies for it.”

In Sweden, *radesyge* is observed chiefly in some of the towns of

Gothland, Fönköping, Kronoberg, Blekinge, Gotheborg, &c. In the fief of Calmar, where the disease prevailed, it was believed to have been imported, in the times of Charles XII., by soldiers returning from Norway, and to have been spread by sailors and a female spinner of Stockholm. In East Gothland it appears to have been imported by soldiers after the war in Pomerania, in 1762. In Norrtelge it is supposed to have been introduced in the same manner, in 1790, after the war of Finland.

This disease, which has now partly disappeared in the above-named countries, still prevails on the opposite coast of the Baltic, where it is known under various denominations according to the localities.

*Syphiloid of Jutland.**—Under this name, Van Deurs has described a disease which he compares to the radesyge of Sweden. But, like Lillie, who had already been sent to Jutland in 1777 to investigate this disease, Van Deurs, on account of the rarity of gonorrhœa amongst the patients he examined, believed the disease in question to be distinguished from true syphilis, and classed it as a separate form, syphilis of the innocent (*syphilis insontium*), for the sole reason that it is chiefly transmitted by spoons, drinking-vessels, clothes, and bedding. Dr. Hassing,† who sees no difference between the syphiloid of Jutland and true syphilis, points out how difficult it is to ascertain the real cause of the disease, which those affected are naturally disposed to attribute to any other circumstance than coition. To him the transmission of secondary affections did not appear doubtful, and he believed that it occurred especially by mucous tubercles.

In Holstein an epidemic is also observed, known under the name of *morbus venereus dithmarsensis*. This disease, which, according to Hübener, showed itself as early as the year 1762, was believed by the physicians of the country to have been imported by the Norwegians, who, in 1785-87, were engaged in making dams in the neighbourhood of Bourg-de-Marsie.

Brandis, De morbo in Holsatim nonnulla regione grassante contagioso ex genere lepræ observationes. Hall. Allg. Litt. Zeitung, 1811. In Bibl. for Læger, 1813, i. *Dührssen*, In Pfaff. Mittheil. Jahrgang, i. Heft 3 und

* Van Deurs, in *Journ. for Med. og Chirurg.*, 1835, juin (*Journ. de Médecine et de Chirurgie*, juin, 1835). Ditzel, in *Biblioth. for Læger* (*Bibliothèque pour les Médecins*), 1845, ii. 270. Otto, in *Rust Magazin*, liv. 203. Uedall, in *Biblioth. for Læger*, 1842, i. 337.

† Rollet, *Recherches sur la syphilis*, p. 108.

4, p. 1, 1833. *Francke*, Morbus Dithmarsensis, Diss. Kilonæ, 1838. *Helwig*, in Actis reg. Soc. med. Haven, vi. 267. *Hübener*, De morbi Dithmarsensis natura ac indole. Kilonæ 1821, et Erkenntniss und Kur der sogenannten Ditmars. Krankh., Altona, 1835. *Michaelson*, in Hamburg Zeitschr. für Med. xxi. 433. *Spiering*, in Hufeland Journ. liii., Heft 1-64. *Struve*, Ueber die aussatzartige Krankheit Holsteins, &c. Altona, 1820, und in *Rust Magazin*, viii. 337.

In Esthonia, a province of Russia, situated to the north of Livonia, on the borders of the Gulf of Finland, we again meet with a disease analogous to the preceding. Erdmann connects it with radesyge, and Seidlitz regards it as syphilitic.* It is observed, moreover, on the whole coast; in Courland—syphiloid of Courland; † also in Lithuania—syphiloid of Lithuania.‡ Of these two latter diseases, the first developed itself after the seven years' war, in 1757, the second in the year 1800. The Russian troops appear to have contributed to their production, or at least to their propagation.

§ 5. *Amboyna pimple*.—*Disease of Saint Euphemia*.—*Pian of Nérac*.

(a) *Amboyna pimple*.—Under this name, Bontius, § in 1718, describes a disease endemic in the island of Amboyna. There spread, he says, at Amboyna and in the Molucca Islands, an endemic disease which, by its symptoms—tophus, ulcers with hard, raised edges, pains and caries of the bones—resembles the venereal disease. There is this difference, however, that the disease in question appears to arise and be transmitted quite independently of sexual intercourse. This reason assigned by Bontius for distinguishing this disease from syphilis, is valueless in our days, and consequently the Amboyna pimple also comes within the list of syphilitic affections, the more so since mercury is here also the best remedy.

(b) *Disease of Saint Euphemia, syphilitic herpes*.—Jean Bayer||

* Rollet, *loc. cit.*, p. 167.

† Tilling, *Ueber Syphilis und Syphiloid*. Mitau, 1833. Bolschwing, *Ueber Syphilis und Aussatz*. Dorpat, 1839.

‡ Albers, in *Preuss. med. Vers. Zeitung*, 1836, Nos. 22, 23. Metzger, *Vermischte med. Schriften*. Königsberg, 1782, i. 81. Schnuhr, in *Preuss. med. Vers. Zeitung*, 1837, Nos. 50, 51; 1839, Nos. 17, 18; 1841, Nos. 2, 3. Theden, *Erfahrungen aus der Wundarzneikunst*, &c. Berlin, 1783, iii. 9.

§ Bontius, *Medecina Indorum*. Leyde, 1718.

|| *Acta nat. cur.*, t. iii. p. 4, et Ozanam, *Traité des Épidémies*, 1823.

has described under this name an endemic which he observed in the month of March, 1727, and which developed itself under the following conditions:—A midwife of Saint Euphemia had on the index finger of the right hand a pustule which caused intolerable itching. The arm soon swelled, and the whole body became covered with herpes. The pustule on the finger continued for four months, and this woman, who went on practising her profession, communicated the disease to more than fifty pregnant women, whom she either delivered or examined. A surgeon, who was consulted, found in the vulva of several of these women ulcers of the same nature. During this time the disease spread to the children whom their mothers were suckling, and to the husbands, to such an extent, that in four months more than eighty persons were found to be infected. The midwife was forbidden to practise. The bodies of those affected became covered with pustules and ulcers, or with hard tubercles, all symptoms which bring this endemic into relation with the epidemic of the Middle Ages. We have here a curious fact which would seem to show that syphilis, transmitted independently of sexual intercourse, frequently assumes a greater intensity. A recent and deplorable instance of this kind is that of Dr. Hourmann.

(c.) *Pian of Nérac*.—This is a disease very analogous to the preceding, with this difference, that it owes its origin to suckling a syphilitic child. At the end of the month of June, 1752, a strange epidemic disease showed itself at Nérac.* The wife of a merchant of that place, after an easy labour in the beginning of November, 1751, gave her child to a nurse, who suckled it well for six months, at the end of which period, this nurse being ill, one of her neighbours gave the breast five times to one of her nurslings; this child fell away visibly, and in a few days numerous pustules appeared upon its thighs. The child was intrusted to another nurse, and several other nurses gave it the breast, all of whom soon perceived that they had pustules on the breasts, which afterwards spread over the whole body. The children of these nurses were affected by the same disease. At the end of December, 1752, more than forty women and children, besides several men, were known to have been infected by this means.

* Joseph Raulin, *Observations de Médecine*. Paris, 1754, p. 250.

§ 6. *Disease of St. Paul's Bay, or syphiloid of Canada.—English disease, &c.*

Swediaur, Practical Observations on Venereal Complaints. Edinburgh, 1788, 172. Trad. fr. *Traité des malad. vénér.*, t. ii. 376. Paris, 1801. *Stratton*, in *Edinburgh Med. and Surgic. Journal*, t. lxxi. p. 276. *Fuchs*, *Hautkrankheiten*, p. 751.

This disease, which made rapid and extensive progress amongst the Canadians in a few years, began to show itself in 1760 amongst the natives of the banks of Lake Huron. In 1780 it appeared amongst the inhabitants of the shores of St. Paul's Bay, and in a few years spread over a great part of Canada, committed great ravages amongst some of the Indian tribes, and chiefly among the Ottawa Indians. In 1785, 5,800 individuals were known to be suffering from this disease in Canada, without counting those who did not give notice of their being affected; it was still unknown at that time, however, to all the neighbouring Indians.

It commenced, according to Swediaur, by small pustules on the lips, the tongue, the interior of the mouth, and more rarely on the genital organs.

These pustules, which at first resembled small aphthæ, filled with a whitish puriform fluid, were so many germs of transmission. The matter contained in them was so virulent, that it infected those who eat with the same spoons, or drank from the same vessels, or smoked the same pipes. It was even observed to be communicated by the bed-linen, clothes, &c.

The disease was afterwards characterised by considerable deposits (tubercles), nocturnal pains in the bones, ulcers of the mouth and throat, complicated affections of the glands, sometimes suppurating, most frequently hard and indolent. Finally, the bones of the nose, the palate, the cranium, &c., became carious; the hair fell off, pains in the chest, cough, loss of appetite, &c., supervened, which announced the approach of death. Both sexes and all ages were equally liable to the disease; children suffered in great numbers.

§ 7. *Endemo-epidemics of syphilis on the coasts of the Adriatic.—Falcadina.—Scherlievo.—Male di Breno, Frença, &c.*

(a) *Falcadina*.—Developed in 1786, in the district of Agordo.

This disease,* first observed at Falcado (whence its name), soon spread in other Tyrolese villages, amongst which were Fassa and Manzon, where it has become extinct since 1814. According to Dr. Zecchinelli, who has described it, it was believed to have been imported by a beggar-woman, suffering from venereal itch, warts, and ulcers on the genitals. Marriages especially contributed to spread the disease, which attacked adults and children, manifesting itself by deep ulcers of the skin and throat, by serpiginous eruptions of the neck and shoulders, gummy tumours, osteocopic pains, but rarely exostoses. It was cured eventually by a mercurial treatment.

(b) *Scherlievo, disease of Fiume*.†—Under this name is known an endemic which for a long time ravaged the coasts of Illyria, Dalmatia, and Croatia. From the villages of Draga and Scherlievo, where it had its origin, it gradually spread to Proputnik, Kakulionovo, Buccari, and even Novi. In the interior of those countries it was observed at Grobnick, Senosich, Schnaberg, Wipach, Adelsberg, &c. In 1800, notice was given to the Government of Fiume, that a contagious disease of an unknown kind had appeared in the village of Scherlievo, eight miles to the east of Fiume, and three miles from the coast of the Adriatic. This disease attacked the face and skin in the form of malignant pustules, which produced ulceration of the skin and caries of the bones, and destroyed the tongue, the ears, and the genital organs. Like the epidemics described above, it commenced with pains in the bones, and especially in the joints; later on, tubercles and ulceration of the skin and throat followed, which generally caused considerable disturbance. In children, the disease always showed itself in the form of an erysi-

* Zecchinelli, in Omodei, *Annali universali di medicina*, Nos. 39, 335. Valenzasca, *ibid.*, No. 93, et *Della falcadina*, fasc. i. Venet., 1840. Sigmund, in *Zeitschr. der. Wien. Aerzte*, 1855, p. 87. Marcolini, *Memor. med. chirurg.* Milano, 1839, p. 18. Facen, in *Gaz. med. Lombarda*, 1849, No. 21, p. 183.

† Cambreri, in Omodei, *Annali universali di medicina*, Nos. 34, 35, 36, 273. *Rapport Journ. gén. de méd.*, lxii. p. i. Boné, *Essai sur la maladie de Scherlievo*. Paris, 1814. Jenniker, in *Æst. med.*, 546; *Jahrb.* 3, 104; Heft 4, 43. Lorenzutti, *Del male di Scherlievo*. Padua, 1830. Michabelles, *Das male di Scaralievo*. Nuremb., 1833. Moulon, *Nouvelles observat. sur la nature du Scherlievo*. Milan, 1834, 2^{me} édit., 1840, et dans *Presse med.*, 1837, mai, No. 35. Sporer, in *Æst. med. Jahrb.*, neueste Folge, ii. 211. J. Vial, *Thèse de Montpellier*, 1814. Sigmund, *loc. cit.*, 93, 142.

latous eruption of a dull red colour, chiefly upon the buttocks, in the groins, on the inner part of the thighs, and on the abdomen. Its transmission occurred by the mutual use of utensils and clothes, by suckling, by the breath, and by sleeping with persons affected. In general, the same individual did not contract the disease twice. The origin of the disease remained unknown. It is asserted, however, that it was brought, in 1790, by four sailors who came with women from the banks of the Danube, after the war against the Turks. Other hypotheses of no greater value exist about this question.

There is reason for connecting scherlievo with the endemic diseases known under the denominations of *frenga*,* *male di Breno*,† *syphilitoid of Hesse*,‡ *spirocolon*,§ and perhaps also with other endemics, such as the *Crimean lepra*,|| the *Kabyle disease*,¶ the *Yang-Mey-Tchoang of the Chinese*** (an ulcer in the form of a raspberry).

The authors who have studied these diseases most carefully are of opinion that most of the symptoms grouped together under these popular names are manifestly and traditionally related to syphilis; they acknowledge, however, that in certain cases these denominations have been given to ulcers resulting sometimes from scurvy, sometimes from scrofula, cancer, or some other disease, so that they lost for some time their special meaning.

§ 8. *Disease of Chavanne-Lure, and some more recent epidemics.*

The account given of the disease of Chavanne-Lure (Haute-Saône) by Dr. Flamaud †† is that of all the epidemics already

* Sigmund, in *Zeitschrift der Wiener Aerzte*, 1855, p. 33.

† Voyez *Est. med. Jahrb.*, v.; Heft ii. p. 21; Sigmund, *loc. cit.*

‡ Rothamel, in *Zeitschr. für die gesammte Heilkunde*, i. 15.

§ Olympios, in *Correspondenzbl. Bayr. Aerzte*, 1840, 185. Pallis, in *Omodei, Annali*, 1842, avril. Pruner, *die Krankheit des Orients*, 177. Quitzmann, *Deutsche Briefe über den Orient*. Wibmer, in *Schmidt. Jahrb. für Medicin.*, xxx. 305.

|| V. Martius, *Dissert. inaugural. de lepra Taurica*. Leipsick, 1815. Krebel, *Lepra Taurica, Med. Zeit. Russlands*, 1846, pp. 3 et 39. Bergson, *Annalen der Charité*, 1852, fasc. 1.

¶ J. Arnould, *La Lèpre Kabyle*. Paris, 1862. Vincent, *Exposé clinique des maladies des Kabyles*. Paris, 1862.

** P. Dabry, *la Médecine chez les Chinois*. Paris, 1863, p. 163.

†† *Journ. complém. du Dict. des sciences méd.*, t. v. p. 135.

described. It began with a feeling of general weakness, followed by nocturnal pains in the joints, of greater or less severity; the mouth and throat were affected, and a pustular eruption appeared on the whole surface of the body, and especially on the head. The kitchen utensils were the chief means of propagation.

With this disease is to be connected an epidemic* which prevailed in 1840 and 1841, in the commune of R——, near Luxeuil, where nearly eighty persons were affected with mucous tubercles about the anus and genitals. Doubtless other endemics, having vaccination for their starting-point, particularly that of Rivalta, might be introduced here, if we had not occasion to speak of them further on.

Here ends the description of the endemics which followed the great epidemic of the fifteenth century. The moment has now arrived for comparing these various diseases with each other, and for pointing out the analogies and differences which they present.

Common characters and differences.—Looked at only in reference to their symptomatic manifestations, these diseases, after a feeling of general uneasiness and pains, mostly violent, in the bones and joints, are characterised, as regards the skin, by pustular eruptions, fungous swellings resembling raspberries, tubercles, which usually leave behind them deep and ugly scars, and, as regards the mucous membrane, by ulcers more or less deep, and which frequently cause perforation of the velum palati.

If we examine them in reference to deeper seated lesions, we find differences which form them, so to speak, into two groups; while, in the countries near the tropics, the symptoms are confined chiefly to the tegumentary system, and rarely invade the internal organs; in other localities, and especially in northern countries, these organs have been the most frequently affected. The absence of blenor-rhagia, and of suppurating buboes, in the majority of cases, is to be remarked. This circumstance has contributed not a little to mislead physicians, and has often led them to reject, without reason, the idea of syphilis.

As regards the evolution, it is to be remarked that the primary symptoms are often insignificant, if not altogether wanting, and that the general phenomena have appeared at the first onset. Most fre-

* Aliès, *Mémoire sur une épidémie de pseudo-syphilis* (*Journ. de méd. de Lyon*, 1843; et *Gaz. médicale de Paris*, 1844, p. 154).

quently a degree of severity is observed more considerable than in ordinary syphilis.

The course of the endemo-epidemics is not everywhere identical. At Brünn, at Saint Euphemia, at Nérac, &c., the propagation of the disease occurred with great rapidity, almost as in the fifteenth century; but, later on, the disease retrograded instead of taking root, and ended by losing its endemic character. In other places, such as various countries on the coasts of the Baltic and north of the Adriatic, the disease, instead of decreasing, extended progressively, in consequence, doubtless, of the unfavourable hygienic conditions amongst the inhabitants, until the moment when it was successfully combated by an appropriate therapeutic and hygienic treatment.

In an ætiological point of view the resemblance is striking; contagion is, in fact, the ordinary mode of transmission, and, so to speak, indispensable.

The means of transmission are, in general, kitchen utensils, linen, or other objects, sometimes actual contact; but rarely, it appears, the act of coition. Inoculation succeeded in some cases, and it was proved that the period of incubation (disease in Brünn, pian) does not differ from that of ordinary syphilis.

Apart from differences which may be called insignificant, therefore, these endemo-epidemics have points of contact with each other and with syphilis which cannot be doubted; everything leads us to believe, consequently, that they do not represent distinct diseases, but one single and unique disease. This being admitted, these diseases henceforth belong only to the history of medicine, never having existed as independent diseases.

Those observers who have studied them most carefully have, moreover, all been struck by their resemblance to the epidemic of the fifteenth century, and their dissimilarity to the generality of known diseases. For all these reasons, we think, with Rollet, that in these epidemics, as in that of the fifteenth century, we must not look for anything other than syphilis, isolated and independent, dis-embarrassed, in a word, of its usual concomitants—blennorrhagia, simple chancre, and chancrous bubo.

The following topographic study, by showing the modifications which syphilis undergoes under given conditions, will enable us, ~~ver~~, still better to follow the identical nature of the various in question.

CHAPTER V.

GEOGRAPHICAL DISTRIBUTION OF SYPHILIS.

§ 1. *Europe.*

(a) *German Ocean and countries bordering on it.*—Syphilis, as we may conclude from what has already been said, still runs a course differing but little from that of the fifteenth century, in certain countries of the north of Europe, and especially on the coasts of the Baltic and of the German Ocean, in Jutland, Ditmarsch, Schleswig, Holstein, on the coast of Sweden, and in certain villages of Scotland, Hesse, and East Prussia. Not far from these countries, however, and always in the North, in Iceland and the Faroë Islands, it is not a little remarkable that this disease has not hitherto been able to establish itself. In the beginning of this century Mackenzie* already recorded the little aptitude of the Icelanders to contract syphilis:—"Syphilis cannot be said to exist in Iceland. Single cases have sometimes occurred from communication with foreigners, but the disease has always been intercepted before it made any progress in the country."

Schleissner, in a work on the diseases peculiar to Iceland, reports as follows:—"The head physician of Iceland, who is anxious to prove that syphilis is foreign to that country, points out that he has frequently treated venereal affections amongst the sailors of merchant vessels, but never amongst the Icelanders themselves." This is the more strange, since there arrive every year in Iceland eighty Danish merchant vessels, the sailors of which have various relations with the inhabitants during the summer. Moreover, the country is explored annually by a hundred and fifty French and Dutch fishing vessels, whose crews also sometimes visit different ports.

* *Island undersøgt.*, &c., Kjobenh., 1849; et *Voyage en Islande et au Groënland pendant les années, 1835 et 1836, sur la corvette la Recherche.* Paris, 1851, p. 42.

Syphilis has, however, several times been introduced into Iceland, but it has never been able to take root there. In 1756 the disease was rather common near the wool-factory at Rejkiawicth, where it lasted until 1763. There were several cases in 1774, but after that time it entirely disappeared. Afterwards Danish sailors reimported it in 1824; in Nordland seventeen cases of syphilis were treated in that year, and in the following year, five, most of which occurred amongst the inhabitants of two farms; but after that the disease ceased."

In his voyage in Iceland and Greenland, E. Robert met with only one instance of genuine syphilis. It was in an Iceland woman who had been contaminated by cohabitation with one of her fellow-countrymen. Thus the people of Iceland are little fitted to contract or to propagate syphilis. This appears to us a circumstance the more worthy of notice, because lepra is a disease endemic in Iceland. In the Faroë Islands, syphilis, according to Panum,* continued unknown until 1844; but, from that time until 1846, about twenty cases of the disease were observed there. In Russia, on the contrary, and particularly in the northern portions of it, amongst the Samoyedes, the Ostjacks, in the south of Siberia, Kamschatka, the Baltic Provinces, Finland, and especially Courland, syphilis generally assumes a severe and malignant form.† It also presents itself with the same characters in several other localities of Russia in Europe and Russia in Asia.

The Kirghiz (Neftel, *Beobachtungen ans den Kirgisensteppen*, Würzburg. Med. Zeitschrift, t. i. p. 64, 1860) are most of them affected with chancre, or constitutional syphilis. It is difficult to know, however, whether this disease proceeds more particularly from the Cossacks, or from the caravans which, from central Asia, traverse the steppes, for it appears to have this double origin. Despite its great extension, however, syphilis amongst these nations has not formidable consequences; it manifests itself most frequently in the form of mild syphilis, and it is only rarely that oœna, or syphilitic

* *Biblioth. for Læger*, 1847, i. p. 316 (*Bibliothèque pour les médecins*).

† Hirsch, *Historisch-geographische Pathologie*. Erlangen, 1860, t. i. p. 358, *et seq.* This important work, from which we have borrowed several passages, has been of great use in the preparation of this part of our treatise.

rupia, are observed, a circumstance which depends, doubtless, upon climatic conditions, and perhaps, also, upon a remedy which the Kirghiz employ, and which has a very marked diuretic and diaphoretic effect, viz., the decoction of *Ephedra equisetina*.

In Sweden and Norway syphilis often commits considerable ravages. In England it is remarkable more particularly for its frequency and extension, which results undoubtedly from the want of a system of inspection of public prostitutes.

(b) *Centre of Europe*.—In the centre of Europe syphilis prevails with less intensity in Germany, Belgium, and France; in Northern Italy this disease, although diffused, is relatively less frequent and less severe. The same holds good for the Austrian empire, for the assertion of Hirsch, who states that syphilis is severe and endemic in the county of Neustra (Hungaria), is not confirmed by Zeissel.* Syphilis does not fail, however, to exercise its ravages in the large cities of those various nations; wherever large masses of people are brought together, and especially in garrison towns, we have evidence of the frequency of that disease.

It is difficult to determine, even by the aid of strict statistics, what is the relative frequency of this disease in a given nation or in a given locality. As a part only of those affected are ever treated in hospitals, the greater number necessarily escape registration. It would be possible, however, to form some idea on the point by referring to the statistical returns now furnished by the military authorities of each country. For instance, if we consult the returns for the English army for 1860,† we find that venereal diseases caused during the year, in the home army, a loss of 8.69 days of service per man, while in France there was only, in 1862, a loss of 3.90 days per man.‡ In any case the proportion of the number of syphilitic patients to the total number of sick is considerable, and may even be termed frightful amongst our troops. The following table, drawn up from the medical statistics of the army for the year 1862,§ may give an idea of this proportion, as well for our troops in the interior as for those in Africa and Italy. In the ports of the west coast the ravages are generally most marked;

* *Lehrbuch der const. Syph.* Erlangen, 1864, p. 127.

† *Army Statistical Report.* London, 1860, p. 12.

‡ *Statistique médicale de l'armée pendant l'année 1862.* Paris, 1864.

§ *Ibid.*, pp. 9 et 21.

at least, that is what may be observed in France, and we believe also in Holland, Belgium, Spain, and Portugal. If in the interior of these latter countries syphilis is less severe, it cannot be denied that it is frequent.

	Number of Men on service during the year 1862.	Sick in Hospital.	Cases of Primary Syphilis.	Cases of Constitutional Syphilis.
Interior	256,322	78,626	10,985	2,636
Algeria	47,869	21,973	2,132	302
Italy	12,387	5,683	478	61
General total....	316,578	106,262	21,595	2,999

The statistics furnished by armies and garrisons are certainly the most perfect means of comparison for arriving at a determination of the relative frequency of syphilis in various countries, as also in the most important localities. They already prove incontestably that syphilis is less frequent in Belgium than in France, in France than in England; they tend to show that this frequency depends upon the insufficiency or entire absence of medical police. In addition to the indications already given, consult *Statistique médicale de l'armée française pendant l'année, 1864*. Paris, 1866. Fränkel, *Syphilis im dänisch. Kriege, Berliner klinisch. Wochenschrift*, p. 159, 1866. Didiot, *Statistique de la syphilis dans la garnison de Marseille*. Rec. de mém. de méd. et de chirurg. militaire. Série 3, t. 18, p. 423.

(c) *Coasts of the Mediterranean and Adriatic*.—Syphilis, in the European ports of the Mediterranean, is still remarkable for its relatively great frequency, and for its intensity. This disease is, in fact, more general at Rome, Naples, and especially in Sicily, as shown by the observations of Chardon,* Jansen,† Loder,‡

* *Gaz. méd. de Paris*, 1852, No. 5.

† *Briefe über Italien*, A. d. Holl, i. 297.

‡ *Bemerk. über ärztl. Verfass. und Unterr. in Italien*. Leipsick, 1812

Zierrmann,* and, more recently, of Sigmund,† than in the north of Italy, as results from the facts related by Guislain,‡ Balardini,§ and Menis.||

On the coasts of the Adriatic, syphilis, as we know, is equally common, but more severe. In Venetia, Dalmatia, Istria, Turkish Albania, and in the interior of those countries, as far as the Tyrol, it puts on the characteristics of an endemic disease. It presents these same characteristics in the north of Turkey, and especially in Servia, Bulgaria, Moldavia, and Wallachia, as far as the borders of the Black Sea. In this latter province, syphilis, according to Weizmann,¶ is not only propagated by contagion, but also develops itself spontaneously; but the arguments upon which this writer founds his opinion do not appear very solid. In the interior of these countries, however, syphilis, always pretty generally distributed, is observed in its ordinary form, at least during the last thirty or forty years, as recorded by Roser** and Rigler†† as regards Turkey; Neugebauer,‡‡ Blaustein,§§ and Barasch||| as regards Moldavia and Wallachia; Roser and Quitzmänn¶¶ as regards Greece. In the Ionian Islands this disease, according to Hennen,*** is more rare.

§ 2. Asia.

(a) *Asia-Minor, Palestine, Arabia*.—Syphilis, as generally distributed and as mild in Asia Minor as in Turkey (Rigler), puts on

* *Ueber die vorherrsch. Krankheiten Siciliens*, p. 184.

† *Loc. cit.*

‡ *Lettres méd. sur l'Italie*. Gand., 1840, p. 69.

§ *Topogr. statist. med. della provinc. di Sondrio*. Milano, 1834, p. 64.

|| *Topogr. statist. med. della provinc. di Brescia*. Brescia, 1837.

¶ *Russische Sammlung für Natur-Wissensch. und Heilkunde*, t. i. cah. ii. p. 126, et *Journ. complém. du Dict. des sciences méd.*, t. i. p. 376, 1818.

** *Ueber einige Krankh. des Orients*. Augs., 1837.

†† *Die Türkei und deren Bewohner*. Wien, 1852, ii. 123.

‡‡ *Beschr. der Moldau und Wallachei*. Leipsick, 1848.

§§ *Rohatsch, Allgem. Zeitung für Chirurg.*, 1842, No. 49.

||| *Wien. med. Wochenschrift*.

¶¶ *Deutsche Briefe über den Orient*.

*** *Sketch of the med. topograph. of the Mediterranean*. London, 1834.
Voy. J. Rose, *la Syphilis à Malte, Lancet*, i. 11, p. 311, 1864.

a more severe type, according to Wagner,* on the high table-lands of Armenia. Carried not long ago into the mountains of Syria by the troops of Ibrahim-Pacha, it is common, according to Robertson,† in the plains of that country, and Tobler ‡ bears witness to its extension into Palestine. Pruner § asserts that in Arabia it reigns almost exclusively in the seaports, and especially at Djedda. In any case, it is met with from Bussora, on the caravan route which traverses the Netjed, as far as Djof. It is also found in the tribe of the Schellouks, on the banks of the White River, while in the south and in the interior of the country it is almost entirely unknown.

(b) *Persia, India, China, Japan.*—Pollach || has established the mild character of the disease we are examining in Persia. Clark,¶ Schanks,** McGregor,†† and several other authors agree in pointing out its great extension in India. In this respect, Schanks observes that it is not uncommon to see one-third of the sick in hospitals affected with this disease. Edmonds ‡‡ calculates the mean number of syphilitic cases annually amongst the troops in India at 12·16 per cent. for Europeans, and 3·18 per cent. amongst the natives. "In the Bombay Presidency," says Kinnis, §§ "venereal diseases commit dreadful ravages; they alone furnish about one-sixth of the admissions into hospital, augment the sick list, deprive the army of efficient men, and undermine the constitution of many, or render them unfit for military service." At Pondicherry, syphilis, according to Lequerré, ||| is infrequent; as regards the women, it is met with

* *Reise nach dem Ararat.* Stuttgart, 1848.

† *Edinburgh Med. and Surg. Journ.*, lix. 247.

‡ *Beiträge zur med. Topograph. von Jerusalem.* Berlin, 1856, p. 56.

§ *Die Krankheiten des Orients*, p. 179.

|| *Wochenbl. d. Zeitschrift d. Wien. Aerzte*, 1856, No. 29.

¶ *London Medical Gazette*, 1844, July, 470.

** *Madras Quarterly Med. Journ.*, i. 248, 260; iii. 13, 31.

†† *Ibid.*, iv. 159. See further, Macpherson, *London Med. Gaz.*, 1841, June, 546. Voigt, *Bibliothèque pour les médecins*, 1834, i. 358. Gibson, *Bombay Med. Transact.*, iii. 68. Leslie, *Calcutta Med. Transact.*, vi. 62. McCosh, *Indian Journ. of Med. Science*, ii. 423.

‡‡ *Lancet*, 1838. June.

§§ *Edinb. Med. and Surg. Journ.*, lxxv. 302.

||| *Quelques considér. sur Pondichéry et ses habitants.* Thèse de Paris, 1837 No. 262, p. 26.

only amongst the bayaderes and in women of a class altogether inferior. According to Custano,* it is the disease most common at Saigon (Cochin-China). According to Saunders,† this disease was common and malignant in Thibet and Boutan (China), as early as last century. Wilson‡ merely mentions its existence on the coasts of China, but Gauthier§ and Armand agree in recognising its great frequency in the Chinese empire, chiefly in the seaports and on the whole coast. The latter relates || that, amongst 530 patients treated in the French military hospital of Tien-tsin, during the first six months of the year 1861, there were ninety cases of chancre and twenty-one of syphilis. "This disease, which is the first of all to be dreaded on arriving in China, is met with everywhere, he tells us, and its greatest frequency is in proportion to the masses of people agglomerated together, and to the amount of their intercourse with foreigners. But, moreover, the venereal affections contracted there by Europeans, assume a character of acuteness and severity disproportioned to the symptoms experienced by the Chinese. Their venereal subjects rarely have the colour of the skin changed, and frequently, in women especially, the infection is concealed under the appearance of a good state of health. It would appear as if China had undergone, for thousands of centuries, a kind of general syphilisation which has progressively attenuated the virulence of the infection in the organisms affected by it." Parker¶ observes that syphilis is generally known in Japan under the name of *fire of lust*.

C. H. Vaenman (*morbi nautarum Indiæ*, in *Cor. Linnæi Aménitatis Academ.*, t. 8, 1785) wrote already in the last century, that in China syphilis occupied rather the external than the internal parts of the body, and that the throat and genital organs often remained intact. In Japan, where prostitution occurs very extensively, syphilis is also very common; but in that privileged country this disease is

* *Bull. de l'Académie de méd.* Séance de l'Acad. de Médecine, 2 juillet 1861.

† *Philosoph. Transact.*, lxxix, 100.

‡ *Medical Notes on China*. London, 1846.

§ *Deux années de pratique méd. à Canton (Chine)*. Thèse de Paris, No. 117, 1863.

|| *Lettres sur l'expéd. de Chine et de Cochinchine* (*Gaz. méd.*, 1862, 677).

¶ *Journ. of an Expedit. from Singapore to Japan*. London, 1838.

in reality extremely mild. This depends, according to Duteuil (*Quelques notes médicales recueillies pendant un séjour de cinq ans en Chine, Cochinchine, et au Japon*, Thèse de Paris, 1864), upon the extreme diffusion of this affection, which appears to have involved all classes in Japan, and that for many years; but to us it appears much more probable that it is due rather to the mildness of the climate of that country. Thunberg (*Voyage de Thunberg au Japon*, Trad. franç. par Langlès et Lamarck, t. 4, p. 1267) did not doubt that it was the Europeans who introduced the venereal disease into Japan, as also into several other countries into which they have penetrated, and acknowledged that it was very common there, but by no means severe.

§ 3. Oceania.

Frequent in the Indian Archipelago, syphilis, according to Heymann,* is met with especially in the coast towns, and in the neighbouring districts which have relations with Europeans, while, in the districts in the interior of some of the islands, it is still, so to speak, unknown. In Sumatra, notably, it was imported, by Junghuhn's account,† for the first time in 1811, by the Europeans, amongst the people of the Batta districts. According to W. Marsden,‡ the venereal disease, common in the Malay bazaars, is almost unknown in the interior of the country. Said by Steen-Bille to be rare in the Nicobar Islands, syphilis is frequent and severe in the Moluccas, where it commits, according to Lesson, greater ravages than when it appeared in Europe.§ The more wretched of the Malays, adds that author, are for the most part ruined by this disease, the symptoms of which constitute the disgusting train of corroding ulcers which invade every part of the body. In Australian Polynesia, syphilis has prevailed since the end of the last century. It was in the years 1769 and 1770 that it was introduced into New Zealand and the Sandwich Islands by the sailors of Captain Cook. Long held in doubt, this assertion has recently been verified by Bouillon-Lagrange,|| who points out, with

* *Darstellung der Krankh. in den Tropenländern*, 187.

† *Die Battaländer auf Sumatra*, ii. 300.

‡ *Histoire de Sumatra*, trad. franç. Paris, 1788.

§ *Voyage médical autour du monde*, 1829, p. 100.

|| *Journ. général de médec.*, i. 38.

reason, that the natives only knew syphilis at first under the name of the English disease. This disease, in any case, soon extended greatly in those islands,* chiefly in Taiti,† where it committed considerable ravages at first amongst the native population. Later on it diminished in intensity. On the Australian continent, and especially in Van-Dieman's Land, syphilis was so rare at the commencement of this century that, from 1821 to 1831, Scott‡ observed in Hobart Town only six cases of primary lesion; even these came from Sydney and the Isle of France. Since the year 1834, this disease, by Dempster's§ account, extended to such a degree that it is now spread over the whole country, at least amongst the Europeans living in it. The same is the course run by syphilis on some of the Polynesian groups of islands, and especially in the Marquesas, and in Gambier Islands. In Pine Island (to the south-east of New Caledonia),|| Vinson relates that chancres usually assume a phagedænic character; but secondary and tertiary affections are not common there. Little known in the Tonga Islands and Samoa,¶ syphilis does not appear to exist at all as yet in some of the countries situated in the middle of the Pacific.

§ 4. Africa.

(a) *Southern Africa*.—If, as Chapotin** asserts, syphilis prevailed but slightly at the beginning of this century in the Mauritius, venereal affections have since appeared there in the most hideous forms. We have seen a great number, says Lesson,†† in which the symptoms attained a maximum of intensity. The patients

* For New Zealand, see Lesson, *loc. cit.*, p. 119. Polack, *Manners and Customs of the New Zealanders*, 11. Power, *Sketches in New Zealand*, London, 1849, 146. Thompson, *British and Foreign Med. Chir. Review*, *oc. cit.* For the Sandwich Islands, Chopin, *American Journal*, May, 1837, 43. Jarves, *History of the Sandwich Islands*. London, 1843. Lockwood, *American Journal*, January, 1846, 91. Gullick, *New York Journ. of Med.*, March, 1855.

† Lesson, p. 55. Wilson, *Edinb. Med. and Surg. Journ.*, ii. 284.

‡ *Provinc. Med. Transact.*, iii.

§ *Calcutta Med. Transact.*, vii. 359.

|| Thèse de Paris, p. 85, 1858, *Élém. de topogr. méd. de la Nouvelle-Calédonie*, &c.

¶ Wilkes, *Narrative of a Voyage*, &c., iii. 32.

** *Topographie médicale de l'Île de France*. Paris, 1812, p. 76.

†† *Loc. cit.*, p. 144.

belonged to the negro race, and were treated in the civil hospital of Rio Grande. It is true that the negroes, before declaring themselves affected, endeavoured to combat the disease by the remedies which they considered suitable, and by drinking decoctions of barks which they gathered in the woods. Mounier* states that syphilis, and acute or chronic inflammations of the abdominal viscera, are the affections most common and most severe amongst the natives of the Island of Nossi-bé. In Madagascar, syphilitic affections, known only within the last few years, have, nevertheless, already become greatly developed, and their course is comparatively acute and rapid.† Cherzer‡ and Schwarz§ point out that syphilis, generally rare at the Cape, is met with still more rarely in the interior of the country. This disease, according to Livingstone,|| is entirely unknown in the centre of Southern Africa, where, moreover, it is believed to become cured spontaneously. "This dreadful disease," says that intrepid missionary, "never persists in any form in the interior of Africa, amongst natives without a cross. It is otherwise with individuals of mixed blood. In all the mulattoes whom I have been called upon to treat, the violence of the secondary symptoms has always been proportioned to the quantity of European blood which flowed in the veins of the patient; amongst the Coronnas, the Gricquos, and the Portuguese half-breeds, the disease committed the same ravages as in Europe. I found amongst the Barotjès a disease which they call manassah, and which greatly resembles the *feèda mulier* of history."

(b) *Nubia and Abyssinia, Central Africa*.—According to Brocchi,¶ and d'Ebn-Omar-el-Junsi,** syphilis has become a real calamity in the negro countries, and especially in Darfour, where it is known under the name of the French disease. This malady, which Pruner affirms to have been imported into Cordofan and Sennaar by troops coming from Egypt, assumes, as Veit†† and Brocchi assert, most of the characters of a morbid endemic condition. In the same way,

* Thèse de Paris, 1849, *De la fièvre interm. à l'île de Nossi-bé*.

† Daullé, *Cinquannées d'observations médic. dans les établis. de Madagascar* (côte Ouest). Thèse de Paris, 1857.

‡ *Zeitschrift der Wien. Aerzte*, 1859, No. 11.

§ *Ibid.*, 1858, No. 40.

|| *Missionary Travels*. London, 1857, 128. *Société anthropol.*, t. i. 237.

¶ *Giornale*, &c., v. 201.

** *Voyage au Darfour*. Paris, 1845.

†† *Wurtemberg. med. Correspondenzbl.*, ix. 107.

after having appeared, at the commencement of the present century, in the confined valleys of Abyssinia, the disease in question spread widely and rapidly, while it has, until very recently at least, respected the inhabitants of the Gallas countries.* An important point for verification would be the pretended introduction of syphilis into Abyssinia by the Portuguese in the fifteenth century. According to Aubert-Roche, the disease readily yields, in that country, to a mild treatment, provided that care is taken to avoid great altitudes, at which the cutaneous symptoms appear to become rapidly aggravated.† The Nubians ‡ borrow from the mineral kingdom a valuable specific against venereal diseases, tereba, a greyish earth, impregnated perhaps with salts of mercury. For three days the patients, having been put upon a spare diet, are gorged with tereba; for the next three days the use of it is suspended, to be resumed and abandoned anew for periods of three days. We are assured that in the Soudan, the most inveterate cases do not resist nine days of this treatment. Reliable authors§ report that syphilis, though frequent in Egypt, and especially at Cairo, is nevertheless mild there. In Upper Egypt, whether in the form of primary or constitutional symptoms, forty days' administration of powdered sarsaparilla, combined with a dry diet, vapour baths, and two or three purges, generally suffice to destroy the effects of the poison. At Alexandria, amongst 8,230 patients admitted into the European hospital from 1844 to 1861, there were 589 cases of syphilis, of which six proved fatal.||

In Algeria, this disease is widely spread, as shown by the observations of Hermann,¶ Schönberg,** Langg,†† Bertrand,‡‡ Armand,§§

* See Pruner, *loc. cit.*, 177. Tamisier, *Voyage en Abyssinie*. Paris, 1839. Rochet d'Héricourt, *Voyage dans le pays d'Adel*, &c. Paris, 1841. Aubert-Roche, in *Annales d'hygiène*, xxv. 15.

† *Diet. encyclopéd. de sciences médic.* Paris, 1864, t. i. p. 251.

‡ *Mission de Ghadamès*. Alger, 1863, p. 351. Note médicale sur le Soudan.

§ Pruner, *loc. cit.* Clot Bey, *Gaz. méd. de Paris*, 1839, No. 45; et *Aperçu général sur l'Égypte*, ii. 324. Griesinger, *Archiv für physiol. Heilkd.*, 1853, No. 2.

|| Schepp, *Du climat d'Alexandrie*. Paris, 1862.

¶ *De morbis qui Algerii occurrunt*. Herbipoli, 1833, 31.

** *Esquisse sur l'Algérie*. Copenhague, 1837, 41.

†† *Bibliothèque pour les médecins*, 1847, ii. 298.

‡‡ *Médecine et hygiène des Arabes*. Paris, 1855.

§§ *Algérie médicale*. Paris, 1854, p. 415.

&c. Furnari* states that it is especially frequent and malignant since the French occupation; while Deleau, Armand, Daga,† agree in thinking that the ravages which it commits are attributable to the negligence of the Arabs. Richardson ‡ asserts that he met with the disease even in the Oasis of Ghadamès, to the south-east of Tripoli. "At Ghadamès," says Dr. Hoffmann,§ "syphilis appears to me to be characterised by the predominance of cutaneous affections. After these come exostoses, then indiscriminately, and with equal frequency, bucco-pharyngeal affections, ulcerative coryza, &c. This terrible disease is transmitted to every family, either by inheritance, or, exceptionally, by direct contagion, i.e., by chancre, or, almost always, by the contagion of secondary lesions, acting by various channels, and especially by the mouth, which becomes infected by contact with cups and other objects used in common. The treatment consists in a very strict diet for forty days, and the use of sarsaparilla (acheba), in decoction or with the food."

(c) *West Coast*.—As early as the beginning of last century syphilis existed on a large scale along the western coast of Africa, and especially at Congo. At the present day it is equally frequent on the coast of Sierra-Leone, in the Bight of Benin,|| at Biafra, and in the neighbouring islands.¶ Daniell informs us that in the kingdom of Benin, and along the river of the same name, this disease is one of the most common and most fatal of all those to which the male inhabitants are exposed, its predominance in that sex being well marked. A great number of them die in their youth, for want of the necessary remedies. It is not rare to see the symptoms continuing during two-thirds of the life of individuals. "The severest forms of syphilis which came to my knowledge," says that author, "were phagedænic, gangrenous, and malignant ulcers, attacking pretty indiscriminately both sexes; virulent gonorrhœa, nodes, cuta-

* *Voyage médical dans l'Afrique septentrionale*. Paris, 1845.

† *Archiv. génér. de médecine*. Paris, 1864, pp. 158 et 287.

‡ *Travels in the Great Desert of Sahara*, &c.

§ *Mission de Ghadamès, Rapport officiel*. Alger, Duclaux, 1863. Medical Report by Dr. Hoffmann, p. 345. Valuable information, which I owe to the kindness of my excellent friend H. Forneron, Inspector of Finance at Oran.

|| Oldfield, *London Med. and Surg. Journ.*, Nov., 1835, 403.

¶ Daniell, *Sketches of the med. topogr. of the Gulf of Guinea*. London, 1849, 43, 96, 114, 138.

neous eruptions, and most of the other syphilitic lesions are prevalent there, and very often resist the rational and energetic treatment of European physicians." Thevenot* affirms, however, that syphilis is very rare in Senegambia, and that the only cases which he observed in that country occurred in Europeans recently arrived.

In the Island of Madeira, this disease, according to Kampfer,† prevails chiefly on the coasts and in the large seaport towns (Funchal); it is rare in the interior of the island.

§ 5. *America.*

A special interest attaches to the inquiry into the existence of syphilis in America; for a long time, in fact, that country was regarded as the birthplace of the venereal disease, and this view was most warmly supported. Delgado,‡ however, maintained that syphilis was of European importation, and, more recently, travellers have been led to share this view, which is founded upon the relations which have existed between the natives and the colonists. Observations made at the end of the last century and commencement of the present one prove, in fact, that syphilis was unknown, or at least very little spread in the north and south of America, so long as the natives remained separated from the Europeans, but that afterwards the extension of that disease was always proportioned to the intimacy of the relations established between them. Even now, certain Indian tribes, having had no communication with Europeans, are exempt from the scourge of syphilis. This, it will readily be seen, is a circumstance little favourable to the doctrine of the American origin of syphilis.

Kalm§ states that from the beginning of last century, and even before the European invasion, syphilis was known in Canada, where it had been introduced in consequence of the frequent contests between the natives and other tribes further to the south, who had commercial relations with us. We know, moreover, that towards the end of the same century it became widely spread, and committed frightful ravages amongst the natives. More recently it

* *Traité des maladies des Européens*, &c., 247, 249.

† *Hamburg, Zeitschrift für Medicin*, xxxiv. 160.

‡ *Del modo di adoperare il legno santo d'India occidentale*. Venice, 1509 in 4°.

§ *Svenska Vetensk. Academ. Handl.*, xi. 280.

raged with equal intensity amongst the natives of Columbia, and of the provinces of the Russian territory in North America.* Syphilis in the United States of America does not differ from the same disease in Europe; amongst the negroes,† however, it is frequent and malignant, as it also is among the Indian tribes in the West, since they began to mix with Europeans.‡ Among the natives of California it has extended to such a degree that it is not uncommon, according to Praslow, to see all the members of a family affected by it. It is not less widely spread in Texas, where Husson§ and Swift|| attribute it to the communications established between the Indians and the Mexicans.

It has been generally agreed¶ to admit that syphilis has attained a greater extension in Mexico than in most other parts of the surface of the globe; the people are so ignorant of the real nature of the disease that they speak of it as of any other, attribute it to general causes, and entertain no doubt as to its spontaneous origin. As early as last century, Hunter** informed us that syphilis was more rare in the Antilles, and especially in the districts where it is asserted to have had its origin, than in any country of Europe. Cordova†† insists upon the relative infrequency of this disease at Porto Rico, and states his belief that it was imported from Spain. More recently, Clark ‡‡ affirmed that syphilis was scarcely known in some of the West India Islands. The disease, according to that author, is so rare among the English troops in Jamaica, that it is possible to find more cases in a single regiment in the East Indies than in the whole garrison at the Antilles.§§ At Haiti, however, it is more

* See Blaschke, *Topogr.*, 66. Romanowsky, in *Med. Zeitung, Russland*, 1849, No. 20.

† Tidymann, in *Philosoph. Journ. of Physic.*, sc. iii. No. 6.

‡ Hunter, *American Med. Record*, v. 412.

§ Coolidge, *Statistical Report*, &c. Philadelphia, 1856, 377.

|| *ibid.*, 385.

¶ See Usler, in *Preuss. med. Veriens Ztg.*, 1843, No. 36. Stricker, in *Hamb. Zeitschr. für Med.*, xxxiv. 530. Newton, *Med. topogr. of the City of Mexico*. New York, 1818. Porter, in *American Journ.*, January, 1853, 40.

** *Remarques sur les maladies des troupes dans la Jamaïque*. Leipsick, 1792, 214.

†† *Memor. geograf. de la Isla de Puerto Rico*. Sanmiltan, 1831.

‡‡ *Madras Quarterly Med. Journ.*, i. 381.

§§ See also Saunders, in Hermann Holder, *Traité de malad. vénériennes*, p. 132.

common and more severe, especially amongst the negroes.* Debauchery, and the few precautions adopted at St. Domingo in reference to sexual intercourse, render venereal affections more common than most other diseases in that country, where, in addition to their usual symptoms, they assume many forms, and complicate most other diseases.†

In Central America,‡ and in several parts of South America, syphilis is as common as in Mexico. Carl. Heinemann (*Kleinere Mittheilungen von der Mexicanischen Expedition*, in *Archiv für path. Anat. und Physiol.*, t. 39, p. 613) speaks of the severity of syphilis in Mexico. Coindet (*Rec. de mém. de méd. et de chirurgie militaire*, t. 13, série 3, p. 339) points out the frequency of indurated chancre in comparison to soft chancre and gonorrhœa, the early appearance of general syphilitic symptoms, and the intensity of the irruptive fever. Several American physicians whom I have had the opportunity of consulting on this point, have informed me that syphilis is particularly severe in Mexico, amongst the Europeans recently disembarked; amongst the natives and the acclimatised Spaniards it is not, on the whole, more malignant than in France. There, as in many other places, the degree of intensity of the disease appears to depend upon the state of acclimatisation of the individual affected. In the Brazils it is frequent and severe amongst the Indian population which has any intercourse with Europeans,§ while, according to Martius,|| it is entirely unknown to the tribes which inhabit the West. It is common in Bolivia,¶ Peru,** Chili,†† and in the States of Rio de la Plata.‡‡ Tschudi observes that syphilitic diseases are so widely spread through-

* Hirsch, *Hist. géographisch. Pathologie*, t. i. p. 363.

† *Conseils aux Européens dans les climats chauds*, t. viii. p. 463. *Maladies communes à Saint Domingue*.

‡ See Bernhard, in *Deutsch. Klinik*, 1854, No. 11.

§ Pleasants, *Americ. Journ.*, July, 1842, 88. Rendu, *Études topogr., &c., sur le Brésil*. Sigaud, *Du climat et des malad. du Brésil*, 117, 133, 421.

|| Buchner, *Repertor. für Pharmacie*, xxxiv.

¶ Bach, *Zeitschr. für vergleich. Erdkunde*, iii. 543.

** Lesson, *Voyage*, p. 27. Tschudi, *Œst. med. Wochenschrift*, 1846, 474.

†† Poppig, in *Clarus und Radius Beiträge zur Heilkunde*, i. 529. Laforque, *Bulletin de l'Académie de méd.*, xvii. 189.

‡‡ Brunet, *Observ. topograph., &c.*, 45. Tschudi, *Wien. med. Wochenschr.*, 1858, No. 45.

out the whole Argentine Confederation, that even in the most isolated localities, individuals are met with having great disfiguration of the face. Oister states that one-third of the population of Cordova is affected with syphilis, and that individuals suffering from that disease are seen by dozens begging in the streets. With regard to the arrival of syphilis in those countries, it results from the researches of Tschudi that the disease was not known in Peru before the Conquest; and, according to that author, and several others, it must have been introduced either by the Spaniards or by the negroes. Less general amongst the Indian population in Chili than amongst the Europeans, syphilis is entirely unknown amongst the tribes who live to the west of the Andes.

Such, then, in the main, are the chief data concerning the state of syphilis in the various parts of the globe. Now that we have made known the principal historical features of this disease, from the earliest times to the present day, the moment has arrived for looking back and embracing in one general view the space we have traversed. At all times and, so to speak, in all places, wherever a system of medical observation has existed, the existence of various affections of the genital organs has been recognised, some of which are not without analogy with the primary lesion of the syphilis of our own days. Ulcers of the mouth and throat, eruptions of the skin, changes of the osseous system, although less frequently mentioned, were not, however, wanting. From the earliest times, therefore, most of the manifestations, to the *ensemble* of which we will apply the name of syphilis, were known. One thing only was wanting for the early observers—viz., a synthetic knowledge of the disease; and of the symptoms which belong to it, some were described separately in the chapter devoted to ulcers of the genital organs; others were confounded and classed with the usual diseases of the period, and especially with lepra. It required the great epidemic of the fifteenth century to show the connection between primary lesions and secondary and tertiary affections, i.e., between ulcers of the genitals and eruptions of the skin, or affections of the bones. From that time only, syphilis appeared complete in all points, and from that time dates, in reality, the establishment of our present syphiligraphic system. Obscure at first, this system has gradually become unfolded. Contagion by the *quid ignotum*, which took the name of *virus*, soon came to be recognised, and sexual intercourse was

regarded as the most frequent source of infection. The evolution of the disease was made clear, the more deep-seated manifestations, those only which attack the viscera, remained in the shade. A day came, however, not much before our own, in which doubts arose concerning the solidity of the brilliant theory founded upon the observations of several centuries. Shaken for awhile by the agitation produced in enlightened minds by the revolutionary ideas of Broussais, this theory soon assumed a better form, and became unshakable. Some conscientious observers, however, still ask themselves whether the epidemic of the fifteenth century really was syphilis, and some doubt still seems to exist; but it can only be transient. The endemo-epidemics subsequent to that of 1495 present, in fact, according to most observers, such a perfect resemblance to the latter, that it is impossible to doubt of their identity, and it might even be justifiable to imitate certain authors who connect these epidemic manifestations with some diseases observed and described in earlier times. A circumstance which proves pretty clearly, however, the syphilitic nature of these various epidemics, is the possibility of connecting their symptomatic disturbances with those of syphilis, studied at the present day under conditions peculiar to certain countries. This study brings out the important fact, that while there are localities in which syphilis is generally mild, or has even been unable hitherto either to become acclimatised or to develop itself, there are others in which that disease, widely distributed, generally shows itself in the most hideous and severest forms; such, for instance, as the great sea-port towns, especially those where the temperature is low and the abuse of spirituous liquors great; further, certain countries in which the disease presents itself with a totality of symptoms differing but little from that which has been observed in the course of the severest epidemics. It is in those places, therefore, or rather in the various circumstances of individuals inhabiting them, that we must look for the reason of the epidemics of syphilis, and especially of that of the *renaissance* period. But the circumstances which in certain places appear to aggravate syphilis—want of acclimatisation, hard work, excesses, overcrowding, and, perhaps, also contamination from one race to another—are precisely those under which the great epidemic of 1495 developed itself. Thus everything leads us to believe that the epidemic disease of that period did not differ, either as to its causes or its nature, from certain cases of syphilis in our own day, occurring, for the most

part, under special conditions. We must bear in mind, moreover, that the Neapolitan epidemic may have been influenced in its propagation by the high temperature of the year. "In that year," says Commynes, in his Memoirs, "*all the wines of Italy were sour, at which our people were much displeased, as well as at the great heat of the air.*" It is also to be remarked that many of the epidemics of syphilis which have followed that of the fifteenth century have had, like the latter, a war for their starting-point. To these epidemics, moreover, may be added, amongst many others, that of which Fergusson has given us a description, and which raged in 1814 amongst the English troops in Spain. Like most diseases, therefore, syphilis is subject to numerous variations, dependent themselves upon peculiar conditions of time and place, and this to such a degree that, slight and mild at one time, under certain circumstances, this disease, at a later period, may become serious and malignant, those circumstances being changed, and *vice versa*.

Even if we had no other object in view, the preceding inquiry would not be without fruit; but at a later moment we hope to be able to draw from it some ætiological inferences of the greatest interest. For the present, in accordance with the considerations into which we have entered, we feel justified in propounding the following propositions, as general conclusions:—

1. Syphilitic affections appear to have been observed and even described in the earliest times. At the same time, as the link which connects these various manifestations, and forms of them a pathological whole, escaped the view of early observers, it cannot be denied that the nosographical system of syphilis dates only in reality from the end of the fifteenth century.

2. In addition to its ordinary form, syphilis sometimes presents itself under an epidemic or endemic form. The first of these forms, which is rare and almost exceptional, only appears under special circumstances. The second, which is more general, may be termed the usual form of syphilis in certain localities where there is an agglomeration of individuals not yet acclimatised, and especially in large sea-port towns.

3. Distributed over almost the entire surface of the globe, syphilis does not prevail with equal intensity everywhere; while, in certain countries, such as Iceland (Schleissner), the centre of Southern Africa (Livingstone), it scarcely germinates, and cannot develop itself, there are places (coasts of the Baltic and Adriatic, Molucca

Islands, Mexico, &c.) in which it attains an extension and an intensity which give to it much of the course of the epidemic of the fifteenth century.

An important consequence, in reference to public hygiene, to be drawn for the topographical study of syphilis may be expressed as follows :—All other things being equal, syphilis rages with greater frequency in proportion as prostitution is less watched over.

PART II.

NOSOGRAPHY.

DEFINITION AND DIVISION.

Syphilis is a specific disease, transmissible by contact or by inheritance, characterised by a slow, periodical, progressive development and especially by changes in the cellular tissue without direct tendency to suppuration.*

It is either acquired or hereditary:—

Acquired, when it has been transmitted by contagion or inoculation;

Hereditary, when it is traceable to a father or mother already infected.

These two distinct morbid forms—the first of which has for its initial manifestation a change seated at the point of contamination, while the second betrays itself first by numerous symptoms, variously localised in the body—are each of them worthy of a particular description, and will be, in turn, the object of our study.

ACQUIRED SYPHILIS.—ITS PERIODS.

The knowledge of the various phases through which accidental or acquired syphilis passes did not entirely escape the syphilographers

* It would be possible to render this definition more complete by adding that the changes caused by syphilis have a special character, that they attack the epithelium first, and afterwards the conjunctive substance. Many are the definitions which have been given of syphilis, but one of the most perfect, and the first, moreover, which gives a correct idea of that disease, is the following one by Fernel:—"Lues venerea totius substantiæ morbus est, contagiosus, tuberculis, maculis, ulceribus, cruciatibus et doloribus sese prodens, solo concubitu aut alio impuro contactu contrahendus." (*De Luis venereæ curatione perfectissima liber, in Aphrodisiaco.*)

of early times, and of the sixteenth century in particular. The Spaniard, Ruiz Diaz de Isla,* already recognised the possibility of establishing a division in the general evolution of the numerous syphilitic affections. He admits three forms; the first is characterised by a general eruption of pimples, and becomes cured without treatment; the second, in which abscesses and ulcers are observed, requires a mercurial treatment; the third, which is accompanied by fever, emaciation, a gradual loss of strength, and severe pains, is, in the author's opinion, a universal infection.

Jean de Vigo,† at the commencement of the sixteenth century, divides the symptoms of the French disease into two periods: *morbus non confirmatus*, i.e., the primary lesion; *morbus confirmatus*, i.e., the constitutional infection.

A little later, Fernel and Thierry de Héry recognise several periods in the evolution of this disease. According to the famous physician of Henry II.,‡ the poison, first introduced into the genital organs, soon invades the surface of the body, and there causes an affection of the roots of the hair; this is the first degree of the disease. In the second degree, the skin, affected in its turn, becomes covered with numerous spots. With the third degree only begins the true venereal disease; the virus has penetrated the whole body, and this is the period of pustular and ulcerous eruptions. Then the poison attacks the solid tissues. Affections of the bones, muscles, and nerves, excruciating pains, and a marasmus which may end in death, constitute, lastly, the fourth degree. This classification of syphilitic symptoms, which is remarkable enough, has at least the advantage of establishing, for the first time, a formal distinction between the superficial and deep-seated changes in the skin.

The division of the symptoms of the venereal disease into periods is not less remarkable in Thierry de Héry:—"The usual symptoms or lesions of this disease are several in number," says that author,§ "of which some *precede*, others *follow*, others *supervene*. Those which precede, are ulcers of varied nature . . . the others (consecu-

* *Tractado*, &c., en casa de Robertis. Sevilla, 1539, in fol. et Rengifo, Thèse de Paris, 1863, p. 38.

† *Opera*, Joannis de Vigo in *Chirurgiæ*. Lugduni, 1542.

‡ *Universa medicina*. Francfort, 1677, 23.

§ *Méthode curative de la maladie vénérienne*, p. 133.

tive) produce pustules and incipient ulcers on the whole body. . . . The last cause fixed pains in the whole head, mostly with exostoses, and the bones frequently become carious. . . .”

Hunter equally recognises distinct phases in the evolution of syphilis. According to Ricord,* the syphilitic drama is divisible naturally into three acts or periods:—

1st. *Primary lesion*, chancre, the immediate result of contagion.

2nd. *Secondary lesions*, or constitutional poisoning, resulting from that infection.

3rd. *Tertiary lesions*, which rarely show themselves before the end of the sixth month.

To these periods, an eminent dermatologist, Bazin,† has added a fourth, which includes visceral lesions, and which he designates the quaternary period.

These divisions, which, strictly speaking, are not absolute, appear to be pretty generally accepted in Germany. Baerensprung, a distinguished syphilographer of Berlin, looking at the question more particularly in an anatomico-pathological point of view, merely acknowledges a hyperæmic and a tubercular period. Secondary syphilis manifests itself first of all by hyperæmias, while tertiary disease everywhere produces tubercles. We ourselves were led formerly to form an analogous classification in a work written conjointly with our friend Dr. Gros.‡ Sigmund,§ on the contrary, adopts a purely chronological division.

Virchow,|| taking pathological anatomy as his basis, classes the symptoms of constitutional syphilis in two groups. One of them has the passive or negative character; marasmus, cachexia, with its various lesions, degenerations of the viscera; the other, on the contrary, includes the irritative or active phenomena; various inflammations and neoplasms.

This division, although alluring, is liable, nevertheless, to one serious objection, that of neglecting everything which relates to the

* *Lettres sur la syphilis*, 2^e édit., 1856, p. 348. See also *Léçons sur le chancre*, 2^e édit., p. 198.

† *Léçons sur les syphilides*. Paris, 1859.

‡ *Traité des affections nerveuses syphilitiques*. Paris, 1861.

§ *Wiener Medic. Wochenschrift*, 1856.

|| *Traité de la syphilis constitutionnelle*. Paris, 1859, trad. franç. de P. Picard.

course of the disease. In such a case, it is wrong to be too exclusive; and if it be important to take into account the anatomical modifications, we must also, like the French physicians, know how not to overlook the chronological order of the phenomena which are the symptomatic expression of them.

These two principles being taken into consideration, we may venture, perhaps, to propose the following classification, which appears to us to have the advantage of pointing out the chief features of syphilis, and of showing certain analogies of evolution between that disease and some of those called virulent.

1st. Period of incubation.

2nd. Period of local eruption, or of the primary lesion.

3rd. Period of general eruption, otherwise called that of secondary affections.

4th. Period of gummy products, otherwise called that of tertiary and quaternary affections.

Well-marked differences separate each of these periods; in the first, it is the complete absence of local manifestations; in the second, the presence of a single, unique modification of the tissues at the point of deposition of the contagious matter. Numerous but superficial lesions, which generally leave no appreciable trace of their passage, characterise the third period; while the fourth is distinguished by changes more deep-seated, and usually followed by cicatrices. Moreover, inoculable and hereditary in the second and third period, syphilis does not appear to be contagious either in the first or in the last. I am not aware, at least, that any experiment has been made to prove whether syphilis be transmissible during the period of incubation, and the attempts which have been made to ascertain whether it be inoculable in the period of tertiary affections have not led to any positive result. In any case, they have not been sufficiently numerous to decide the question positively.

CHAPTER I.

PERIOD OF INCUBATION—ITS EXISTENCE—ITS DURATION.

By incubation we understand the interval of time which elapses between the moment of the absorption of the syphilitic poison, and that of the appearance of the first local manifestation. It is the moment of the modification which precedes the reaction of the organism.

Admitted by a small number of physicians, though generally denied, the doctrine of the incubation of syphilis was first developed and maintained by Alph. Cazenave.* “Syphilis,” says that author, “is a general disease from its commencement, which dates from the very moment at which the infecting contact occurs, as in all diseases which are virulent, and consequently general. . . . The primary symptom is not the first mode of action of syphilis, but really only the first phenomenal expression of the infection, and when it manifests itself the disease has already commenced.” Chausit † and Vidal ‡ were amongst the first supporters of this doctrine, now generally adopted by the most eminent syphilographers,§ and in support of which two modes of proof may be adduced, the one experimental, the other clinical.

Long denied by a celebrated school, the incubation of syphilis was not really made obvious until very recently; thanks, above all, as we are bound to admit, to inoculations practised upon persons free from that disease. Employed partly for the purpose of proving the contagiousity of secondary affections, the artificial inoculation of syphilis in healthy subjects has taught us, better than could have been done by clinical observation, that the reaction of the organism, into which the poison has entered, does not manifest itself imme-

* *Traité des syphilides*, p. 142 et suiv. Paris, 1843.

† *Annales des maladies de la peau et de la syphilis*, t. iv. p. 177.

‡ *Traité des maladies vénériennes*, p. 196. Paris, 1855.

§ See Clerc, Rollet, Follin, Cusco, Diday, H. Lee, Baerensprung, Lindwurm, &c.

diately by external phenomena, but only after a longer or shorter period, as occurs in all virulent diseases. From the experiments performed, it results, in fact, that the wound in which the products employed for the inoculation was deposited, soon becomes cicatrised, almost as would a simple wound; the cure, however, is far from being permanent. Soon, at the same spot, there appears a single, isolated lesion, the first manifestation of the disturbance of the economy affected in all its parts. The time which this special manifestation requires to show itself has been determined, and thus it has become possible to fix the period of the incubation of syphilis. The following table, intended to clear up this point, contains facts which admit of no objection:—

Name of Authors.	Mode of Inoculation.	Period of incubation.	Primary lesion.	Interval between inoculation of poison and appearance of secondary symptoms.	Earliest secondary manifestations.
Wallace *	Condylomata. Inoculation by removal of the epidermis	Days. 28	Simple chancres	Days. 75	Squamous eruption.
—	Ulcerated tubercle, probably an indurated chancre	21	Ditto	89	So-called tubercular eruption.
—	Ditto	30	Ditto	66	Papulo-tubercular eruption.
—	Psudracious pustules	29	Ulcerated tubercle, or rather indurated chancre	66	Squamous eruption.
—		30	Ditto	54	Papulo-squamous eruption.
Vidal†	Pustules of ecthyma	35	Two indurated chancres	about 128	Roseola and mucous patches. Alopecia.
Waller‡	Mucous patches	25	Ecthymatous chancre	50	Maculated eruption.
—	The blood	34	Ditto	65	General roseola.
Rinecker§	Pustules of acne in a new-born child	28	Infecting chancre	159	Cephalalgia. Gastric derangement. Mucous tubercles.
—	Mucous tubercles	23	Ditto	76-80	Lenticular eruption. Angina and mucous patches.

* *Annales des maladies de la peau*, t. iv. p. 36-44. Paris, 1851-52.

† *Annales des maladies de la peau*, t. iii. p. 115, 1850-51.

‡ *Annales des maladies de la peau*, t. iii. p. 183-186.

§ *Archives générales de médecine*, 5^e série, t. i. p. 559, 1858.

Name of Authors.	Mode of Inoculation.	Period of incubation.	Primary lesion.	Interval between last inoculation and appearance of secondary symptoms.	Earliest secondary manifestations.
Rollet and Guyenot*	Mucous patches	Days-23	Reddish papule, soon becoming raised	Days-76	Papular and exanthematous eruption.
Gibert†	Secondary mucous patches about the anus	18	Prominent coppery papule, which runs and becomes covered with a crust. Glandular affections.	55	Papular and pustular eruption.
—	Ditto	25	Ditto	37	Syphilitic roseola.
—	Blood taken on the level of a large squamous papule on the forehead	about 35	Reddish papule, slightly squamous, of the size of a six-penny-piece	about 72	Syphilitic roseola.
P. Pellizzari‡	Blood taken from the cephalic vein of a woman affected with secondary syphilis	25	Dark red, round papule, covered with a crust, which falls on the eleventh day, and leaves visible an indurated chancre	65	Roseola on the trunk of the body.

From the facts given in this table, it results that, from the eighteenth to the thirty-fifth day, counting from the time at which inoculation was performed, the first symptom indicative of the general infection appears. The duration of the incubation in these cases varies, therefore, from eighteen to thirty-five days; this gives a mean of twenty-seven days. This applies especially to the inoculation from secondary lesions. In a case in which Rollet § inoculated the pus of an infecting chancre in a patient who had already two soft chancres, the incubation period was of eighteen days only. It was

* *Gazette hebdomadaire de médecine et de chirurgie.* Paris, 1851.

† *Traité pratique des maladies de la peau et de la syphilis*, t. ii. p. 456. Paris, 1860.

‡ *La Sperimentale*, anno XIII., serie iv. t. iii. fasc. 9, 10, anno 1861, Firenze.

§ *Études cliniques sur le chancre produit par la syphilis secondaire.* (*Archives de méd.*, 1859, vol. i. p. 409.)

of twenty-eight days in a young girl, free from any affection, who was inoculated in 1859 by Baerensprung, with the secretion from an indurated chancre, and of twenty-three days in a similar case related by Lindwurm.

Clinical observation, to be conclusive in such a question, must be made under special and, it may be said, exceptional circumstances, and rarely affords, therefore, all the precision desirable.

Wallace of Dublin, Waller of Prague, and some other authors, have, however, given instances of this kind which are very nearly, if not quite, conclusive. In a pupil of the Alford school, of whose case Dr. Chaussit* has left us an interesting account, the incubation lasted from the 21st of April to the 18th or 19th of May, *i.e.*, twenty-seven or twenty-eight days. In a case which we have ourselves had the opportunity of observing, and of which a brief account follows, it lasted about the same period of time.

Obs. I.—A young law student, a friend of mine, left Paris on the 18th of July, 1859, for the purpose of passing his holidays in the country. On arriving in a small country town, he lived in the midst of his family, and his conduct was exemplary, when, on the 15th of August, he showed me a conical ulcer, with hard, raised edges and a greyish base, situated on the left part of the scrotum, and accompanied by swelling of a single gland. This ulcer, the diagnosis of which could not be doubtful for a moment, had shown itself only a few days previously, although my young friend, who had no interest in deceiving me, positively assured me that he had not had any sexual intercourse for several days before leaving Paris. After having taken the necessary precautions for assuring myself that he was not mistaken as to the first appearance of the ulcer, I was convinced that the chancre had appeared nearly a month after the last act of coition. I gave him proto-iodide of mercury, and the chancre soon disappeared. At a later period he had secondary symptoms.

In three other cases in which particular circumstances enabled me to obtain exact information as to the duration of the incubation of syphilis, this duration was of twenty-nine, thirty-one, and thirty-five days respectively. According to Sigmund (*Wiener Med. Wochenschrift*, Nos. 77 to 81, 1865), this period does not exceed the fifth week in the great majority of cases (eighty-five out of a hundred), and very frequently (sixty-seven times out of a hundred) does not pass the limit of the fourth week. Observations made very carefully

* *Annales des maladies de la peau et de la syphilis*, t. iv p. 174.

do not admit of our assigning to the incubation period of syphilis a duration of more than six weeks. Alfred Fournier, however (*Recherches sur l'incubation de la Syphilis*, Paris, 1869), quotes cases of an incubation of seventy days; but supposing these observations to have been exact, it must be admitted that such cases are purely exceptional.

But in twenty-eight cases studied by Diday in connection with this question, the mean period of incubation was only fourteen days. When we observe, however, amongst the statistics of this author, cases in which the incubation lasted at the most a few days only, we are inclined to ask whether the information furnished by the patients may not have been inexact, and hesitate to accept the result. Everything leads us to believe, in fact, that the incubation period of syphilis does not differ with the mode of transmission. In any case, as this period is not always the same, we may inquire upon what the differences depend.

Can it be the quality of the poison, or the age of the lesion chosen for inoculation? In ten observations where the matter inoculated was taken from a secondary lesion, the period of incubation was twenty-eight days, while it was only eighteen days in two cases in which the pus inoculated was taken from a primary sore. In other cases, however, it was longer.

However, if it be allowable to draw conclusions from such a small number of facts, it would result that the incubation period of syphilis is shorter in cases of transmission from a primary sore; and if, on the other hand, it were proved, as Diday asserts, that syphilis communicated from a secondary lesion is less severe than that from a chancre, this other proposition would follow: the longer the period of incubation, the milder are the manifestations of the general infection.

Such a result would certainly not be without importance, in reference to our prognosis at least. But before giving a positive opinion on this delicate point, we must wait for new facts, and, as yet, we must continue to attribute to the morbid proclivity of the patient a certain share in the degree of severity of the consecutive affections.

The comparative study of virulent diseases, with the exception of hydrophobia, teaches us that there is a relation little to be doubted between the period of incubation and that of evolution in those diseases; syphilis, pre-eminently a chronic disease, is also that which has one of the longest periods of incubation. Would it not be pos-

sible, then, in reference to this point, to establish here a connection with what occurs in the class of beings in whom the period of development and longevity stand in an almost constant relation to each other? But whatever may otherwise be the interest attached to a knowledge of the incubation period of syphilis, one fact is established—it is the existence of this incubation itself. It is no longer possible to believe, with Hunter and Ricord, that chancre is a local lesion which only infects the general economy afterwards. We must see in this lesion the *external and primary expression of a general condition already attained*, whence the practical lesson that cauterisation of a syphilitic ulcer, employed as a preventive means, is entirely useless.

Like the local manifestations, the general derangements of the organism are usually wanting in this first stage of syphilis; and yet there is reason to ask whether the organism does not suffer already. The patient, whose case was related by Chausit,* presented, during the course of that period, emaciation, pallor, lassitude, a state of chloro-anæmia; the appearances, in a word, of a severe disease, and all without any appreciable cause. All the difficulties of a diagnosis under such circumstances are easy to conceive. Even if we saw the foregoing symptoms follow sexual intercourse with a suspicious person, it would scarcely be possible to predicate the outbreak of syphilitic disease.

The serious responsibility connected with the artificial inoculation of the poison of syphilis in a healthy individual will long leave in doubt the question whether the blood is already virulent in this first period of syphilis, and whether an individual already affected is still capable of undergoing a fresh contamination. On this point, however, an appeal to analogy and induction is possible. It is allowable to believe, in fact, that syphilis does not behave differently, in this respect, to cow-pox and small-pox.

* *Ann. des maladies de la peau et de la syphilis*, t. iv.

CHAPTER II.

PERIOD OF LOCAL ERUPTION.

THIS period includes the whole interval of time which elapses from the moment at which the reaction of the organism at the point of contamination begins to show itself, to the time at which the first general manifestations supervene. With this period are connected,—

1st. The local change at the point of contamination, or the primary syphilitic lesion, with its varied forms.

2nd. The concomitant modifications of the lymphatic system, glandular affections, &c.

A lesion of the integument, usually single, accompanied by multiple, hard swellings of the glands, and usually appearing first in the form of a papule, which generally becomes eroded, or ulcerates later on, and always shows itself several weeks before the invasion of the general symptoms. This is, on the whole, the character of the initial lesion, which, by its slow evolution, its tendency to plasticity rather than to suppuration, already reveals, like the initial pustules of cow-pox and of small-pox, what will afterwards be the various morbid localisations of the infectious disease.

The name *indurated chancre*, or *Hunterian chancre*, which has long served to designate this first manifestation of syphilis, is not only an expression which offends the ear, it is also a term wanting in precision. We know, in fact, that the primary lesion is not always and necessarily an ulceration, and for this reason, we shall no doubt be pardoned for attempting to change, or at least to restrict in its application, a term generally received.

§ 1. *Local eruption.—Primary lesion.*

Synonymy :—Indurated chancre, syphilitic chancre, non-suppurating chancre, infecting chancre.

Aloysius Luisannus, *Aphrodisiacus*, &c., cité à l'Historique. *Hercules Saxonia*, *Perfctissimus Tractatus luis venercæ*. Pataviæ, 1597. *Nicolas*

de Blegny, l'Art de guérir les maladies vénériennes. Paris, 1673. *Turner*, A practical dissertation on the venereal disease. London, 1717, and 1793. *Boerhaave*, Tractatus medico-practica de lue venerea. Lugduni Batavorum, 1751. *Van Swieten*, Comment in Boerhaavii Aphorism., &c., Vol. V., Lugduni Batavorum, 1772. *Fabre*, Traité des maladies vénériennes, 3^e édit., Paris, 1773. *Plenk*, Doctrina de morbis venereis. Wien, 1777, 1787. *Cirullo*, Osserv. prat. intorno alla lue venerea. Napoli, 1783. Traduct. française par Aubert. *Howard*, Practical observ. on the natural history and cure of the venereal disease. London, 1787. *Clossius*, Ueber die Lustseuche. Tubingue, 1797. *Johann Wendt*, Die Lustseuche in allen ihren Richtungen. Berlin, 1816. *Swediaur*, Practical observations on the more obstinate and inveterate venereal complaints. London, 1784. Traduct. française. Paris, 1801. *John Hunter*, A treatise on the venereal disease. London, 1786. Annoté par Babington, et trad. en français par Richelot, avec notes de Ph. Ricord, dans la collect. des Œuvres complètes. Paris, 1839. *Benj. Bell*, On gonorrhœa virulenta and the venereal diseases. London, 1793. Trad. française de Bosquillon. Paris, 1802. *Evans*, Pathological remarks on ulcerations of the genital organs. London, 1819. *R. Carmichael*, An essay on the venereal diseases which have been confounded with syphilis. Dublin, 1814; 2^e édit., 1825. Clinical lectures on venereal diseases, reported by Samuel Gordon. Dublin, 1842. *Ph. Ricord*, Traité pratique des maladies vénériennes, recherches critiques et expérimentales sur l'inoculation. Paris, 1838. Lettres sur la syphilis. Paris, 1856, 2^e édit. *Wallace*, A treatise on the venereal disease and its varieties. London, 1838. *F. J. Behrend*, Syphilidologie, eine Sammlung des Wissenswerthesten aus der neuesten syphil. Litteratur, 1839, 1845, 7 vols., continuée depuis. *Bertherand*, Précis des maladies vénériennes. Strasbourg, 1852. *A. Casenave*, Annales des maladies de la peau et de la syphilis. Paris, 1844-52. *Zeissl*, Compendium der Pathologie und Therapie der primar. Syphil. und einfachen vener. Krankheiten. Wien, 1850. *Holder*, Lehrbuch der venerischen Krankheiten nach dem neuesten Standpunkte der Wissenschaft. Stuttgart, 1851. *Maisonneuve et Moutonier*, Traité pratique des maladies vénériennes. Paris, 1853. *John Egan*, Syphilitic diseases, including experimental researches on inoculation. London, 1853. *Simon*, in Handbuch der speciellen Pathologie und Therapie von Rud. Virchow. Erlangen, 1855. *Diday*, Exposition critique et pratique des nouvelles doctrines sur la syphilis. Paris, 1858. Histoire naturelle de la syphilis. Paris, 1863. *Fidal de Cassis*, Traité des malad. vener. Paris, 1853; 2^e édit., 1855. *F. Michaelis*, Compendium der Lehre von der Syphilis. Wien, 1859. *Rollet*, Recherches cliniques et expérimentales sur la syphilis. Paris, 1861. *Melchior Robert*, Nouveau traité des maladies vénériennes. 1^{re} édit., Paris, 1853; 2^e édit., Paris, 1861. *E. Follin*, Traité élémentaire de pathologie externe, t. i. p. 635. Paris, 1861. *Alph. Guérin*, Maladies des organes génitaux externes de la femme. Paris, 1864. *L. Belhomme et A. Martin*, Traité pratique et élémentaire de pathologie syphilitique et vénérienne. Paris, 1864. *Edm. Langlebert*, Traité théorique et pratique des maladies

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Guérin, Du chancre induré. *Gaz. des hôp.*, juillet, 1861. *Melchior Robert*, Quelques considérations sur l'auto-inoculabilité du chancre infectant et du chancre dit mixte. Marseille, janvier, 1862. *Cusco*, Leçons cliniques sur la syphilis. *Gaz. des hôpitaux*, 1862, pp. 253, 269, 301. *Maunder*, On primary venereal sores, the possible errors in diagnosis, &c. *The Lancet*, Jan., 1862. *Edm. Brousson*, Du chancre phagédénique et de son traitement par le calomel à doses fractionnées. Thèse de Strasbourg, 1862. *Berkeley-Hill*, Foreign opinions on syphilis, collected and arranged by *British Medical Journal*, 1862, p. 15. *Henri Lee*, De l'inoculation syphilitique, traduction française par le Dr. Émile Baudot. Paris, 1863, et *The Lancet*, Sept., 1862. *Belhomme*, Du chancre phagédénique et de son traitement. Thèse de Paris, 1862. *W. Boeck*, Recherches sur la syphilis. Christiania, 1862. *Lindseurm*, Ueber die Verschiedenheit der syphilitischen Krankheiten. Würzburg, Med. Zeitschrift, iii. 3, p. 143, 1862. *Michaelis*, Der Contagienstreit in der Lehre von der Syphilis, in Virchow's Archiv. für Anat. und Physiolog. Path., t. xxiv. mai, 1862. *Théry*, Chancre non induré de la face et syphilis constitut. *Revue méd. Belge et Schmidt's Jahrb.* 190, t. cxviii. 48, 1862. *Gounard*, Essai critique sur l'institution de la dualité chancreuse. Thèse de Paris, 1863. *Aimé Martin*, De l'accident primitif de la syphilis constitutionnel. Thèse de Paris, 1863. *Ladureau*, Considérat. générales sur la syphilis et raisons probantes en faveur de l'unitisme, 1863, in 8°. *Galligo*, Trattato teorico-pratico delle malattie venerée. 2^e édit., Firenze, 1863. *L. Nodet*, Études cliniques et expérimentales sur les diverses espèces de chancre, et particulièrement sur le chancre mixte. Thèse de Montpellier, 1863, et Paris, 1864. *Giacomo Albertetti*, Significato patologico della sifilide. Torino, 1864.

Historical portion.—Although there can be no doubt that contagious ulcers of the genital organs were known even in the earliest times,* still, as little trouble was taken to describe the special characteristics of these lesions, it is easy to understand that the antiquity of their existence may at least appear uncertain to some minds. Since the epidemic of the fifteenth century, it has been positively recognised that these ulcers are not all equally important, and one of them, which has received the epithet of *callous*, has since then been regarded, on account of its consequences, as the most serious.

Gaspard Torella, Villalobos, already point out the induration of certain contagious ulcers. More precise on this point, Jean de Vigo wrote in 1514:—"Nam ejus origo, in partibus genitalibus, videlicet in mulieribus et in virga in hominibus semper fere fuit cum pustulis parvis, interdum lividi coloris, aliquando nigri, nuncquam subalbi cum callositate eas circumdante."†

* *Voy. Historique de la syphilis.*

† *Aphrodisiacus*, t. ii. p. 450.

"Pierre Maynard and A. Ferri employed very similar language. In 1544, Lobera * regarded induration as the certain sign of the French disease :—"Sunt pustulæ cum aliqua duritie . . . interdum in virga nōnulla ulcera cum *duritie et callositate* quæ sanari exacte nequeunt, perpetitur quod *morbi gallici certum signum est.*"

Fallopious, in 1555, gives the description of the indurated ulcer and the lymphangitis which sometimes accompanies it. He regards the induration which it leaves behind it as a certain sign of syphilis :—" . . . Quoties videtis sanatam cariem et quod remanent *calli* circa cicatricem, tenete esse confirmatum gallicum ; ideo moneo vos quoniam calli isti sunt manifestissima et demonstrativa signa morbi confirmati."

Botal, in 1563, recognised indurated chancre of the mouth and nipple. As early as the middle of the sixteenth century, therefore, the symptomatic value of induration in a primary syphilitic sore was acknowledged.

Amongst the authors who have followed, a great number have equally admitted the significance of the chancrous induration. Let us mention Petronius, Thierry de Héry,† Amb. Paré, N. de Bléguay, J. L. Petit, Astruc, J. Hunter, B. Bell, Babington, more recently Ricord, &c. The latter, whose name is deservedly celebrated in syphilography, had the merit, in this point, of leading back the minds carried away for a time by physiological views, to a more exact and rigorous mode of observation. He knew how, like Hunter, to combine experiment with clinical observation ; and if there be reason for reproaching him with the disdain with which he refused, for a long time, to accept certain acquired truths, we must equally admit that his resistance, and even his errors, have served science, by provoking, on the part of his adversaries, precise and exact observations.

In a work which forms an era, that eminent syphilographer applied himself to proving, by the aid of experiment, that the pus of blenorrhagia is not inoculable. Admitting the semeiotic value of induration, he attributed the absence of this phenomenon in certain

* *Aphrodisiacus*, p. 404.

† All methodical observers, says Th. de Héry, will bear witness that the most certain sign in a pustule or ulcer is hardness of the base, &c. (*La méthode curatoire de la maladie vénérienne.*)

cases to an idiosyncrasy peculiar to the patient. But Bassereau,* observing that the chancre which is followed by constitutional symptoms, *i.e.*, the indurated chancre, transmits only a chancre of the same kind, and always followed by the same manifestations, was led to attach less importance to idiosyncrasy in the determination of the characteristics of the local lesion, and to attribute a greater share to the nature of the virulent agent. The seed rather than the ground appeared to him to modify the product, and thus he acknowledges two distinct kinds of chancre.

Later on, when Clerc, in 1855, then Alfred Fournier, Rollet, and several other observers, recognised that indurated chancre was not inoculable in the patient himself; and when a certain number of experimental facts came to prove that this lesion only manifests itself after a long period of incubation, the idea of separating it more completely from the soft chancre than had previously been done presented itself, and the doctrine of the *duality of chancre* was established, which soon became accepted by a great number of French and foreign syphilographers. This doctrine met with opponents, however, amongst whom are to be counted, especially in France, Melchior Robert and Langlebert. Being entirely disinterested in the question, we shall have to examine the arguments adduced on both sides.

Clinical portion.—Like most of the other symptomatic affections of syphilis, the primary lesion presents varied aspects, with which it is important to become familiar, if we wish to arrive at a correct diagnosis. Characterised anatomically at its commencement by the appearance, at the point of contamination, of a new growth, which forms a protuberance more or less voluminous, this lesion takes, at first, the form of a papule which, according to the exuberance of the new product, perhaps also according to the general disposition of the subject, continues dry, which is rare, or becomes eroded, or ulcerates more extensively; whence result, for clinical observation and symptomatology, the following varieties of the first syphilitic manifestation:—

- 1st. The dry papule.
- 2nd. The chancrous or chancriform erosion.
- 3rd. The indurated chancre.

* *Traité des affections de la peau symptomatiques de la syphilis.* Paris, 1852.

A. ANATOMICAL STUDY.

Whatever the variety of the primary lesion, its elementary constitution does not change; the induration peculiar to it always presents the same anatomical composition. To Ch. Robin,* Lebert, and Acton, the chancrous induration resembles the development of a fibro-plastic tissue in the thickness of the dermis. Virchow † believes it to be of a nature entirely similar to that of the gummy tumours, and regards it as an exuberance of the cellular tissue. This view differs little, in reality, from the preceding, except in theory. Baerensprung,‡ finding that part of the granular substance which forms the base of an indurated chancre is coloured red by solution of iodine, concludes from that fact that the exudation which constitutes the specific induration of chancre, differs from the exudation of ordinary inflammation, and that it is identical with the effusions which take place under the influence of constitutional syphilis in the various other organs. Ordoñez,§ who has carefully studied indurated chancre of the prepuce, has established the following facts:—Thickening of the epidermis around the point occupied by the ulceration; the existence of small hæmorrhagic foci in the papillary layer of the dermis, and the augmentation in volume of the papillæ of the dermis and the infiltration of them by a large quantity of embryoplastic or embryonic elements of cellular tissue, namely, round or oval nuclei, measuring from four to seven thousandths of a millimeter in diameter, fusiform bodies of small dimension, bundles of fibres of cellular tissue newly formed. In addition to the neoplastic induration, there exists an induration of contiguity, especially connected with the irritation of the sudoriparous glands. Verneuil asserts (*Bulletin de la Société de Chirurgie*, Oct. 10, 1866) that these glands become hypertrophied more readily in the vicinity of soft chancre, and that they may contribute to cause certain errors in diagnosis, such as the mistaking a soft chancre for a syphilitic chancre. This result does not differ from those obtained by previous observers, and all, apart from slight differences in description, agree

* *Comptes rendus des séances de l'Académie des sciences*, 2 Nov., 1846.

† *Syphilis constitutionnelle*, trad. française de J. P. Picard. Paris, 1860.

‡ *Gazette hebdomadaire de Médecine et de Chirurgie*, 1862, p. 310; et *Charité-Annalen*, t. vi. p. 16.

§ *Comptes rendus et mém. de la Soc. de biologie pour l'année*, 1863, p. 83.

in recognising in the induration of chancre, what we also have found in it, a new growth at the expense of the cellular tissue, a hypertrophy which soon undergoes the granulo-fatty metamorphosis. It is to this metamorphosis, a kind of molecular necrosis, that the formation of the ulcer is partly due; and this, no doubt, is thus connected with the special evolution of the new growth. For this reason there is some ground, as we shall be able to judge in the end, for comparing the anatomical lesion of chancre to that which belongs to the manifestations of tertiary syphilis. And is not this very identity of the morphological product a curious fact, which should serve to prove the identity of the disease at its commencement and at its termination, in all its phases or periods? We must not, however, attach too much value to microscopical data. The same elements which we observe are met with in many lesions which are by no means specific, so that, at its commencement, as well as during its whole evolution, it is to the examination by the naked eye also, and not to the microscope alone, that we must look for the discovery of the distinctive characteristics of syphilitic lesions. These characteristics, in fact, are found less in the elementary constitution of the morbid product than in its physiognomy. Here, as everywhere, it is in the form especially that we must look for the characteristics of the species.

In conclusion, it may be mentioned that Dr. Szabadfoldy, of Pesth,* once recognised in the contents of primary syphilitic pustules the presence of rounded cells, furnished with appendices resembling ciliae, and contractile, which, in that writer's opinion, might well have a certain share in the fact of the contagion.†

B. SYMPTOMATIC STUDY.

1. *Dry papule*.—This form, the rarest of those which syphilis assumes on its first appearance, is still so little known that it has not yet been made the subject of special description, although experience and clinical observation concur to establish its existence.

After an incubation generally long, there appears at the point of

* *Virchow's Archiv für patholog. Anatomie und Physiolog.*, t. xxix. p. 470, 1864.

† The contractile cells of which Szabadfoldy speaks are evidently nothing else than globules of pus, the sores in question being *soft chancres*, which have nothing to do with syphilitic infection properly so-called.

contamination a papular protuberance, usually having the form of a patch, one or more centimeters in extent, of a dark or brownish red colour, round or oval, firm and elastic, and sometimes covered with whitish scales, which give it a certain analogy with the syphilitic papules of the next period. This analogy was striking in a case of inoculation, performed by Gibert,* in an individual who had a reddish, diffuse, irregular, slightly squamous and perfectly dry papule as primary lesion. In a case given by Dubuc,† there was a large patch from two to four centimeters in extent, situated in the pubic region. In a patient whom I myself observed, there existed on the face a patch differing little from these, which, at first sight, offered a great resemblance to a *nævus*.

In these and several other cases the local lesions, which resemble papules, or even cutaneous tubercles and gummy products, disappear by resolution, or rather by the absorption favoured by the neighbouring tissues; the induration, without ever proceeding to ulceration, gradually loses its resistance and elasticity, diminishes in extent, becomes, as it were, gelatiniform, and leaves behind it a slight violet-coloured or blackish depression.

We have here, therefore, a distinct and, perhaps, not sufficiently recognised variety of the primary lesion, and one which it was important to point out. Easy to distinguish from the syphilitic eruptions in which the papulæ are seldom isolated, this variety might be confounded with a *nævus*, or some other change of tissue, if its consistence, its peculiar colour, and the buboes which are, so to speak, its necessary companions, did not serve to distinguish it from them.

The small number of cases by the aid of which it is at present possible to give a description of this lesion do not suffice to determine its origin. It should be mentioned simply that, in the case quoted by Gibert, blood taken from the vicinity of a squamous syphilitic papule was employed for the inoculation. Moreover, the process of inoculation would appear to be favourable to the development of this variety of the primary lesion, even if the nature of the product inoculated has no influence upon its appearance.

2. *Chancrous or chancriform erosion*.—This form, the most frequent of those which primary syphilis presents, according to the statistics of Bassereau (146 times in 170 cases), and also according

* *Loc. cit.*, p. 458.

† *Des syphilides malignes précoces*. Thèse de Paris, 1864, p. 63.

to Diday, has long been described and distinguished from primary indurated chancre. Carmichael no doubt alluded to this manifestation in the description which he gives of a class distinct from benignant chancres, under the name of *patchy excoriation*; and it is probably this same manifestation which Wallace has called *superficial primary syphilis*.

The parchment-like chancre of Ricord, the *Venerola vulgaris* of Evans, the condylomatous affection of Rinecker, the superficial erosion of Langlebert, are only, after all, this primary form under a different name. Bassereau and, later on, Diday, are the authors who have most particularly called attention to its characteristics and significance; it is the *chancrous* erosion of the former, the *chancriform* erosion of the latter.

It generally commences by a copper-red spot, scarcely raised, papular, dry, which afterwards desquamates, becomes covered with a crust, or rather with thin scales, and finally becomes eroded or slightly ulcerated on the surface. Of variable diameter, and round or irregular in shape, this ulceration, always circumscribed, presents a flat, rose-coloured surface, on a level with the surrounding parts, or prominent either from the development of fleshy pimples, or from excess of induration. It discharges a small quantity of a serous fluid, and presents a diffused base, which is indurated superficially rather than deeply. Its most common site is behind the corona glandis; but it may be met with everywhere else, at any point of the cutaneous or mucous surfaces. Its variable extent is sometimes so slight, the discharge so little abundant, and cicatrization so rapid, that in the absence of the characteristic induration, it is prudent to refrain from giving a positive opinion as to its nature until the appearance of secondary symptoms.

In the generality of cases, the duration of this lesion does not exceed two months (Bassereau). It terminates by the resolution of the indurated point, and cicatrization of its surface. Not unfrequently, about twice in three times, it does not cause *permanent cicatrices*, unless it occupies the edge of the gland or the cutaneous tissue. In some cases, however, a slight induration is left by the local lesion. The lymphatic ganglia corresponding to it are hard, and indolent.

The diagnosis is not always easy. In the presence of a lesion so trifling in appearance, we ask ourselves, in fact, whether we have to do with a disease so serious as syphilis, and often hesitate. If the

erosion be covered with crusts, as usually happens when it is situated on the skin, or on a portion of the mucous membrane exposed to the air, it is seen to assume some of the characters of a herpetic vesicle, of a pustule of ecthyma, or of a psydracious or squamous eruption, and may be confounded with one or other of these elementary lesions. It is easily distinguished, however, by its isolation, its course, and the special congestion of the neighbouring glands.

Although we are still very much in the dark as to the source of the lesion in question, we may be permitted to believe, with Diday and Langlebert, that it most frequently results from a secondary affection, and more especially from mucous patches.

3. *Indurated chancre.*—*Non-suppurating chancre.*—Syphilographers are far from being all agreed as to the primary form of this variety. After it had long been believed, with Ricord, that the ulceration was the first symptom, and that the induration only supervened afterwards, there is now a tendency to adopt the opinion of Babington, which is more in conformity with the experimental facts, and according to which thickening of the tissues precedes the ulceration. "The character of primary venereal infection," says the commentator of Hunter, "is essentially an induration, which afterwards passes into ulceration."

The difficulty of clinical observation, to which is due, no doubt, the differences of opinion on this point, naturally leads us to have recourse to experiments upon healthy subjects. But from this we learn, as in the experiment of Waller, of Prague, that there is developed at the point of contamination, first of all a red spot, soon followed by an elevation or papule, which may attain the size of a lentil or a pea, and which is, as we know, the result of a contribution of material, of a neoplasm, of the cellular tissue. Of a red or dirty yellow colour, rounded and hard to the touch, this papule becomes covered with greyish scales, which gradually become thicker, and finish by forming, in some cases, a true crust, under which a cup-shaped ulcer of greater or less depth rapidly develops itself. Most frequently indolent, and having the appearance of having been *scooped out*, this ulcer presents raised and rounded edges, a glossy iridescent surface, a floor generally greyish and lardaceous, and is bathed in a retrograde secretion, which is not reinoculable, and not in pus. Enveloped, as Ricord expresses it, in a kind of hard, circumscribed nucleus, which serves it both for a covering and a bed, it has good claims for being called the most characteristic lesion of

sypilis at its commencement. The induration, which forms its base, and extends beyond its circumference, has been compared by Bell to one-half of a dried pea. It presents to the touch the sensation of an elastic, resistant, chondroid tissue, a sensation *sui generis*, very different from that afforded to the finger by cicatricial tissue or phlegmonous œdema. The hemispherical shape most frequently assumed by it is not, however, constant; sometimes irregular, it becomes elliptical, is wanting at the centre, and exists only at the edges (*annular sypilis* of Wallace).

After about six weeks' duration, the hard chancre enters into a last phase, its edges empty themselves and collapse; the disorganised particles which covered its floor, where they formed a sort of false membrane, become eliminated or absorbed; granulations form, and cicatrization soon takes place from the circumference towards the centre.

The cicatrix which follows it is rounded and slightly depressed; it is the seat of an induration which is sometimes persistent, as pointed out by J. L. Petit.* In certain cases, in which the chancre occupies a cutaneous surface, this cicatrix presents a dark brownish, bronze colour, truly characteristic, but which, in time, generally becomes entirely effaced, leaving behind it a white mark, which is of no importance. This peculiarity is important, however, in a retrospective point of view, and may frequently, like induration, which remains for a time varying from a few weeks to several years, enable us to diagnose the previous existence of a lesion which, despite its long persistence, may fail to be observed by the patient, the more so as indurated chancre, rarely phagedænic or corroding, is almost entirely indolent.

Cicatrization is not the only mode of termination of indurated chancre. In some cases we see, at the termination of the ulcerative period, luxuriant, fungous, vegetating pimples develop themselves on the surface, which have nothing syphilitic about them. At other times, indurated chancre undergoes a complete transformation; it becomes converted *in situ* into a mucous papule or patch. Pointed out already by Ricord, this latter mode of termination has been the subject of interesting observations on the part of J. Davasse and Deville.† The characteristics of the mucous papule are substituted

* *Traité des maladies des os*, chap. xv.

† *Arch. génér. de méd.*, 1845.

for those of the chancre, and the latter ceases to exist. Cases of recurrence of the primary syphilitic lesion may be regarded as exceptional.

It would be going too far, no doubt, to maintain that syphilitic chancre never puts on any other form than those of which we have just been speaking. In fact Professor Béhier kindly showed me, in the course of the year 1867, a case which it would be difficult to class under either of those forms. A young man affected with a chancre of the gland, with phagedæna, inoculated himself with success, and had undoubted syphilis a short time after. My friend, Dr. Panas, observed a similar case which was inoculated in the patient himself, and, like the preceding, followed by syphilitic manifestations. We have here, it will be said, the mixed chancre of Rollet, but that lesion appears to me to call for a more profound study; for my own part, I see here only inoculations of phagedænic matter, and not of the poison of syphilis.

Number and situation of the primary lesion.—Whatever form it may assume, the first manifestation of syphilis usually remains single; and if it should happen that we meet with, in the same individual, several lesions of the same kind—for instance, several indurated chancres—they are generally of the same standing, that is to say, they have developed themselves simultaneously, or almost at the same time, and rarely by successive inoculations. The reason of this isolation is easy to understand. Syphilitic chancre, in fact, is not self-inoculable, as has been proved by the observations of Clerc,* and several other syphilographers. The initial lesion of syphilis has no favourite situation; it may show itself at any part of the body wherever the poison has been deposited, but it is on the genital organs that it is most frequently observed. In a report of 471 infecting chancres observed in men, Fournier† found only twenty-six extra-genital chancres. Amongst the chancres of the genital organs, 314 were situated on the glans or the prepuce, others on the sheath of the penis, the meatus, the scrotum, &c.; lastly, seventeen were intra-urethral.

On account of its situation, and of the theories to which it has given rise, urethral chancre merits special attention. Still termed *larvated chancre*, this lesion undoubtedly exists. In 300 cases of

* *Union médicale*, 25th Oct., 1855.

† Cité par A. Martin. Thèse de Paris, p. 62.

PERIOD OF LOCAL ERUPTION.

gonorrhœa, Melchior Robert asserts that he observed it *de visu* seven times; twice only did inoculation cause him to diagnose it; in three cases he was unable either to see it directly or to demonstrate its existence by inoculation; but the presence of numerous glandular swellings in the groin, and the prodromata of constitutional syphilis, enabled him to form a rational diagnosis.

The twenty-six extra-genital chancres observed by Fournier were distributed as follows:—On the lips, twelve; on the anus, six; on the tongue, three; on the nose, the eyelid, and the leg, one. After the sexual organs, the lips and the mouth are the most frequent seat of the primary lesion. Rollet was able to state that the mouth was the principal focus, the great laboratory of secondary syphilis. Sigmund* applied himself to ascertaining the frequency and the characters of syphilitic chancre in those regions. The eyelids, the pharynx, and the tonsils do not escape the contagion of syphilis. Martellière states that he observed chancres on the surface of the tonsils in three instances within a short space of time.† Primary chancre has never been observed either in the œsophagus or the stomach, and, if we are to believe certain experimenters,‡ it is little, if at all, contagious in those regions. The same does not hold good for the anal region, in which may often be observed chancres of small size, mostly hidden within the radiating folds of the mucous membrane. As a general rule, the uncovered parts are affected by preference, and whenever a persistent ulcer is observed, the possibility of its being a chancre should be borne in mind.

In women, in whom chancre frequently appears to be wanting at the outset of syphilis, the genital organs are, as in men, the usual seat of the primary lesion. In forty-five females affected with infecting chancre, A. Martin found thirty-three genital and twelve extra-genital chancres. The majority of the genital chancres were situated on the external genitals. This lesion is rarely met with on the walls of the vagina; sometimes, however, its presence on the neck of the uterus has been recognised.§

* *Ueber Schanker*. . . in *Schmidt's Jahrbücher*, t. cxii., 1864.

† Compare: Diday, dans *Mém. de la Soc. de méd. de Lyon*, 1861-62, p. 45.

‡ See Petit-Radel, *Cours de maladies syphilitiques*, t. i. p. 20.

§ See Bernutz, *Des affections syphilitiques de l'utérus*. Mémoire lu à la Société médicale des hôpitaux, et *Revue médic. chirurg. de Paris*, t. xviii. p. 235, 1855.

Accordingly as they occupy one or other of these various situations, chancres of the genital organs in women frequently present well-marked differences; while on the external surface of the labia majora they usually are distinctly indurated at the base, along their inner edges they usually appear in the form of small ulcers, more or less elongated in shape, which gradually run into each other. Another form of ulcer which appears to belong to syphilitic chancre is also seen in this region, according to Melchior Robert; it is a rounded, shallow ulceration, with rather indistinct edges, the surface of which becomes clean, red, and prominent. This variety of chancre not unfrequently rests upon indurated tissues; at other times it is impossible to discover the least induration, although the corresponding groin presents indolent glandular swellings, and that in cases in which the patients have afterwards shown symptoms of constitutional syphilis.

The seat of chancre in men is also not without influence upon the characters which it presents, and especially upon induration. The most voluminous indurated chancres are usually situated behind the corona glandis; there, in fact, the induration generally occupies a large portion of the balano-preputial mucous membrane. Chancre of the meatus produces, in some cases, an induration, as it were, cartilaginous, of nearly the whole of the glans. The induration of chancres of the face is generally extensive. In other cases this symptom is scarcely marked, an ulceration of small extent presents an induration which may be termed miliary. Thus we cannot insist too much upon the numerous shades of difference which syphilitic chancre presents.

The graphic form of the induration is not less variable. If the chancre occupy at the same time tissues differing in structure, the induration upon which it rests is irregular, anfractuous, semi-lunar, or elliptical; in some cases it is only observed at the periphery of the ulceration, the tissues at the centre remain soft and slightly depressed (skin of the penis, labia majora).

The limbs, the face, but more especially the mouth and the anus, are the most common seats of *extra-genital chancres*. In cases of isolated ulcers of those parts, we should suspect the existence of syphilis, and that in spite of the patient's assurance to the contrary. In this respect especially, chancre on the head calls for all our attention.

Modifications and complications.—We have described the usual

characteristics of the initial lesion of syphilis; let us add that in certain cases this lesion undergoes modifications which change, more or less, its physiognomy. Distinct from the complications of which I shall have to speak ere long, these modifications supervene when any cause of irritation affects the surface of the ulcer. This not only becomes inflamed and suppurates, which changes its aspect and suffices to remove the induration, which is, to a certain extent, a specific criterion, but the secretion from it acquires new properties; if inoculated, it may cause the development of pustules. Blisters, irritating ointments, powdered savine, &c., are so many agents capable of producing this change. Two patients affected, the first with one, the second with two, indurated chancres, were admitted into the Lock Hospital in July and August, 1862.*

H. Lee inoculated them at several spots upon the thigh with pus taken from the ulcers, without any result. A small blister was then applied to the ulcers, and savine ointment afterwards used to dress them; considerable inflammation ensued; the surface of the chancres became the seat of an abundant, puriform secretion, which, when inoculated as before, gave rise to *pustules*, the secretion from which was itself reinoculable with effect. At Marseilles, Melchior Robert had already recorded analogous facts. Experiments of the same kind, made in Norway and in Germany, have afforded the same result. The application of a simple irritant to the surface of a syphilitic chancre is, then, sufficient to cause it to undergo notable changes. The pus of a soft chancre applied to the surface of an indurated chancre ought, *à fortiori*, to cause similar changes; and this is what has, in fact, been proved by the experiments of Rollet, of Lyons, and of his chief pupils, Laroyenne, Basset,† and Nodet.‡

The chancreous modification which results from this contact, and to which it has been sought to attribute a large part in the doctrine of the duality of chancre, has received the name of *mixed chancre* from Rollet, on account of its origin, and also, no doubt, because it possesses the property of transmitting a double affection. This new lesion has been produced, first of all, under the following circumstances:—"An indurated chancre of the meatus, with glandular swellings, is inoculated without result; the pus from a simple

* *The Lancet*, September 13th, 1862.

† *De la simultanéité des malad. vénér.* Thèse de Paris, 1840.

‡ Thèse de Montpellier, 1863.

chancre is then applied to it, and five days after, a second inoculation developed the chancrous pustule."* Reproduced in several experiments performed by Laroyenne and Basset, the mixed chancre has been obtained in the same way, and by the aid of the same processes, as well in England as in Germany. The following case, given by Lindwurm, is in relation with what has gone before:—"Chancre of the groove, with numerous swelled glands and indurated base. The patient is inoculated on the arm with pus from his chancre; the result is negative. After inoculation on the other arm with the pus of a simple chancre, a simple chancre appeared there, with pus from which the surface of the indurated chancre was inoculated. Two days after, the indurated chancre suppurated freely and began to burrow; the patient was reinoculated with this new pus; the result gave a simple chancre." The same experiments, repeated at Marseilles by Melchior Robert, did not always succeed: "We will add, however," says that author, "that we were unable under some circumstances, and whatever might be the virulence of the pus employed, to inoculate the surface of the indurated chancre."

From these various experiments, repeated by numerous observers, results, nevertheless, this important fact, that the pus of a soft chancre applied to the surface of an indurated chancre greatly modifies that ulcer. It suppurates, gradually becomes deeper, and loses more or less its original type, at the same time that it becomes inoculable in the subject of it. From this to accidental formation there is but one step. No doubt natural contagion, under certain circumstances, produces the same effect; but are we obliged to admit, with Rollet and his school, that we have to deal with a mixed chancre every time a chancre apparently soft is followed by constitutional symptoms, or an indurated chancre is reinoculable, has an unusually short period of incubation, or is accompanied by suppurating bubo? That appears to us to be a view not yet sufficiently justified. Further on we shall speak of the influence of certain habits, of climate, of race, and even of sex, so many conditions capable of imparting changes more or less appreciable to the initial phenomenon of syphilis.

Gangrene and *phagedæna* are almost the only complications of

* Laroyenne, *Annales des malad. de la peau et de la syphilis*. Lyon, 1859.

† Melchior Robert, *Nouveau traité pratiq. des malad. vénériennes*, p. 263.

the primary syphilitic lesion; inflammation is, at the very least, extremely rare, since we cannot but believe now-a-days that the pretended abscesses * observed, at the period of involution, in the thickness of the parts indurated, did not contain pus, but merely the remains of the constituent elements of the neoplasm, arrived at its retrogressive stage. In the same way there existed formerly a belief in the suppuration of gummy tumours. Phymosis, or paraphymosis, rarely complicates infecting chancre; but when they supervene, the skin and preputial mucous membrane become pale and mammillated, and the touch, without causing severe pain, gives to the finger a peculiar sensation, somewhat resembling that of the hard œdema of the elephantiasis of the Arabs.

The *gangrene* which complicates syphilitic chancre usually appears in the course of the ulceration. The surface of the sore, previously red or greyish, deepens in colour, and becomes the seat of small dark points of ecchymosis; its sensitiveness increases; the secretion is sanious and contains remains of tissue, with some small shreds of blackish blood; the ulcer extends and gradually destroys the indurated tissues; but this destruction takes place slowly, and rarely reaches the limit of the normal tissues. The circumference of the chancre is not unfrequently red and inflamed, and this inflammation is reproduced in the already indurated glands to such an extent as, in some cases, to run on to suppuration. The causes once removed, this complication disappears under the influence of an appropriate treatment; the surface of the chancre loses its violet colour, healthy granulations appear, and cicatrisation takes place rapidly.

The primary syphilitic ulcer, when it becomes *phagedænic*, presents a more or less irregular shape, livid, jagged edges, a base little indurated but œdematous, and an uneven floor, usually covered with a yellow or greyish matter, or else with sanious pus mixed with organic detritus. The property of this complication is to spread superficially rather than deeply, and chiefly to homogeneous tissues. A sensation of pain, of smarting, or of burning accompanies this new state. Under these circumstances the diagnosis of syphilitic chancre is most difficult. In exceptional cases only, phagedæna causes somewhat considerable losses of substance, and spreads to the glands.

* A. Martin, *De l'accident primitif de la syphilis constitutionnelle*, p. 49. (*Gazette des hôpitaux*, p. 551, 1864.)

The abuse of spirituous liquors in the warm seasons, hot climates, unhealthy dwelling-places, bad food, want of cleanliness, the abuse of mercury, and various cachectic conditions, are the principal causes of the complications described above. In England, the effect of spirits in the production of these symptoms is so marked that some of these ulcers have received the name of *œnophagedænic*.*

Gonorrhœa, a distinct contagious disease.—The doctrine of *syphilis at the first onset* (*Syphilis D'Emblée*), that is to say, without primary local lesion.—The opinion expressed for the first time in 1767, by Balfour, that gonorrhœa and syphilis are two distinct diseases, adopted by Ellis, C. Tode, A. Duncan, B. Bell, Bosquillon, and, later on, by Hernandez, Cockburn, and most of the English military surgeons, such as McGregor, Hennen, Guthrie, &c., controlled and verified by the experiments of Ricord, and afterwards by those of Rollet, is now a fact too clearly proved to admit of the slightest doubt regarding it. From the moment it was shown that the pus of gonorrhœa is not inoculable, and that it produces only rarely and in exceptional cases chancrous ulcers,† what end can it serve to assert that gonorrhœa may engender syphilis, or be merely one of the initial symptoms of that disease? Is it not then preferable and more logical to believe that the pretended cases of syphilitic infection, not preceded by chancre, but by a simple gonorrhœal discharge, have been falsely interpreted, either because the primary lesion escaped observation, because there existed, as Ricord assumes, a larvated or urethral chancre, or because the syphilis did not manifest itself primarily by any local lesion, and the consequent affections appeared at the first onset (*d'emblée*)?

Although of old date, the doctrine of *syphilis d'embrée* deserves attention. George Vella,‡ one of the first syphilographers to develop it, admitted, in his day, that in the cases in which no lesion of

* Ricord, *Lettres sur la syphilis*, 3^e édit. Paris, 1863, p. 256.

† In a case in which Hunter performed inoculation with gonorrhœa l pus, an ulcer ensued. Hernandez repeated Hunter's experiment several times, always without success. "In eighty-five cases of gonorrhœa which I observed," says Ricord (*Traité prat. des malad. vénér.*), "four were proved to be of a syphilitic nature (larvated chancre) by the inoculation from them, which produced chancres; eighty produced no result. In one case, the results of the inoculation were not given."

‡ *De morbo gallico opusculum*, cap. i., in Luisinus, *Aphrodisiacus*, p. 208.

the genital organs was observed, the poison deposited upon them had been absorbed without producing any local change. . . . "Non est necesse membrum illud pati solutionem continuitatis; nam mala complexio putredinalis non corrosiva, potest insensibiliter et furtive ingredi in porositatibus carnis et, post certum tempus, imprimere ægritudinem, totum corpus manifeste lædentem."*

Reproduced by A. Matthiöle, A. Lecoq, and G. Fallöpius, this theory, afterwards rejected by Fernel, has been again brought forward by Fabre, who has endeavoured to support it by facts in reality little conclusive, borrowed partly from J. L. Petit. Again abandoned, it has lastly been presented to us in a new shape, by a most distinguished surgeon, Dr. Cusco.†

It is a fact that we meet with a great number of individuals, not otherwise unobservant, affected with syphilis, without their ever having noticed any primary lesion, except perhaps, in some cases, a gonorrhœa of more or less standing.

In such a case, the field for hypothesis is vast. Some observers simply assume carelessness on the part of the patients, others prefer believing in the existence of a larvated urethral chancre, whilst a third set believe that gonorrhœa ‡ may have been the starting-point of the syphilis; but it may happen that neither of these hypotheses is the true one. Urethral chancre is, on the whole, of rare occurrence; we know what is to be thought of gonorrhœa as an initial symptom of syphilis, and the personal negligence of an individual must be great indeed to cause him to overlook an affection which rarely lasts less than a month.

Why not admit, then, that the initial phenomenon may sometimes be wanting, just as, at a later period, we frequently observe that secondary or tertiary affections fail to appear? This also is a hypothesis, it will be said; but it is at least as admissible as the preceding ones. And since it has been proved that chancre is not the cause,

* I am far from wishing to assert the doctrine of *syphilis d'emblée*, as I have not sufficient proofs for the purpose, but especially since the researches of Chauveau (see *Gazette des hôpitaux*, p. 423, 1865) have shown that the vaccine or variolous poison injected into the vessels does not give rise to any local symptom, it is admissible that syphilis may equally, under certain conditions, develop itself without any primary manifestation.

† *Gaz. des hôpitaux*, 1862, p. 253, 269, 301.

‡ See G. Lagneau, *Archiv. de méd.*, 1856, t. i. p. 323.

but the first symptomatic manifestation of syphilis, this hypothesis has at least analogy in its favour.

At the time when the inoculation of small-pox was common, Valentin having inoculated a young girl in both arms, eight days after there was no trace of the punctures. He repeated the inoculation; the same evening there was fever, and three days later a general discrete eruption, without the second punctures having shown any sign of eruption. In cow-pox,* as in small-pox, the pustule of inoculation may be wanting, and there is reason to believe that the same applies to syphilis; yet before making this assertion positively, we must examine the facts. But we must confess that the observations in reference to this point which have come to our knowledge do not appear sufficiently conclusive.† We will, nevertheless, give the following case, the details of which we had the opportunity of following, and without which we should doubtless not have entered into all the preceding considerations. We venture to hope that this case will, at the very least, direct attention to a question which is, after all, not without a certain clinical interest:—

Obs. II.—Mrs. X., aged 30, brought to me, towards the end of the month of October, 1859, a child, six years old, just taken from the nurse, the whole of whose body was covered with a most distinct papular syphilitic eruption. Mrs. X., the mother of this child, had never had, any more than her husband, the slightest symptom of syphilis. Desirous to ascertain the cause of the disease in the child, I carefully examined its anus; besides being encircled by a row of mucous patches, this orifice presented a well-marked, funnel-shaped dilatation. In the mouth, only a few mucous patches were observed. I warned Mrs. X. of the nature of her child's disease, and of the danger to which she exposed herself by continuing to kiss it. Once a week or fortnight Mrs. X. brought the child to me, I having subjected it to specific treatment; she herself never made the least complaint. Moreover, the mother of this lady having been taken ill, I was called in to attend her, and thus had more frequent opportunities of seeing Mrs. X. On the 25th of January, a few days after the death of her mother, this lady experienced an unusual feeling of dis-

* See Bousquet, *Nouveau Traité de la vaccine des affections varioleuses ou varioliformes*. Paris, 1848.

† Outre les observations apportées par Fabre, *Traité des maladies vénériennes*, p. 8, 3^e édit. Paris, 1778, ou peut consulter trois faits consignés dans le remarquable ouvrage de Bassereau, *Traité des affections de la peau symptomatiques de la syphilis*, p. 116, 121 et 122. Paris, 1852.

comfort; some days later she felt extreme lassitude, pain in the left dorsal region, and sore-throat, with slight cough. To this condition were soon added violent pains in the cervical region, the left shoulder, and most of the joints. Sleep, usually sound, became difficult and agitated. On the 2nd of February I was consulted, the patient merely complaining of the discomfort and the pains. I ordered her *linden tea, small doses of opium, and sinapisms.*

No amelioration, but a sensation of throbbing in the temples, the stomach, and several other places, with violent palpitation of the heart. On the 17th of February the patient took a sulphur-bath, and on the following day she noticed on the skin a considerable number of small pimples, of a brownish red colour. This time I was aware that I had to deal with a syphilitic infection, which had taken the form of a papular eruption. I carefully examined the whole of the skin, the throat, and the genitals, and questioned the patient for the purpose of ascertaining the starting-point of the infection; but it was in vain, for the patient, who was very careful of herself, had never observed anything whatever, and I was unable, on my part, to find not only an ulcer, but even a cicatrix. From that time a mercurial treatment I had ordered was strictly carried out. On the 15th of March the eruption disappeared, and the precursory symptoms had almost entirely vanished. The treatment was continued for three months. On the 22nd of August there was deep ulceration of the left tonsil, and exostoses on the fore-arm. The treatment was resumed; pains in the head, and gummy tumours of the skin afterwards supervened.

No mucous patches appeared on the genitals, and her husband continued to have connection with her without the least bad result.

We have no intention of drawing conclusions from this solitary case; the more so because, a few days ago, on interrogating this patient afresh, she stated that she had observed on the edge of one of her nostrils a small point, which lasted some days, but which did not differ from the vesicles of herpes, to which she is very subject. In any case, if syphilis at the first onset exist, it is, at the very least, rare and exceptional.

FALSE SYPHILIS, OR LOCAL SYPHILIS.

Synonymy: Simple chancre, soft chancre, non-infecting or non-suppurating chancre, chancroid, *chancrelle*.

Historical portion.—The lesion which these various synonyms serve to designate, generally called *soft chancre*, has long been known and described. But was it described and known before or after indurated chancre? This is a point very difficult to decide, and it is probable that both forms have existed from the very earliest times.

We find, in fact, in ancient authors, side by side with passages which would appear to refer to indurated chancre, unmistakable descriptions of soft chancre.

Hippocrates already remarked that certain ulcers of the genitals were accompanied by buboes. Celsus* divides these ulcers of the genitals into *dry* and *clean*, *moist* and *purulent*. He moreover describes phimosis and paraphimosis, frequent complications of the lesion we are examining.

In like manner Dioscorides,† Galen,‡ Marcellus Empiricus,§ Ætius,|| Paulus Eginetus,¶ speak of certain ulcers of the genitals which are very probably nothing else than soft chancres. The Arab school is far from being mute on this subject. Mesue,** Avicenna,†† Avenzoar,‡‡ and especially Albucasis,§§ treat at great length of these lesions.

The physicians of the Middle Ages are not content with merely mentioning ulcers of the penis and inguinal buboes, but assign to them impure connection as a cause. Among these authors are Guillaume de Salicet, Arnaud de Villeneuve, Guy de Chauliac, Valescus de Tarente, Argelata|||.

After the epidemic of the fifteenth century, several syphilographers, Marcellus Cumanus, Jean de Vigo, Benedictus, &c.,¶¶ knew how to distinguish certain ulcers of the genitals from the manifestations of the pretended new disease—the syphilis of Fracastor. But in a short time G. Vella, N. Massa, Lecoq, obscured this point in the nosography, and led many observers into error. Many authors

* *Loc. cit.*, liv. v. et vi.

† Dioscoridis *Opera*. Nicandri *Theriaca et Alexipharmaca cum scholiis* édit. d'Aut. Sarazin (Saracenus). Francfort, 1598, l. i. c. 34, p. 24.

‡ *Opera per J. Cornarium*. Basil., 1549, finit. med., 18, pp. 189 et 190.

§ *De medicamentis*, c. 32, p. 391.

|| *Loc. cit.*, l. xiv. c. 14, p. 16.

¶ *De re medica*, iii. 59, p. 478. Basil., 1532.

** *Opera divi Joannis Mesue*, summ. iii. part. iv. s. i. c. 12. Lyon, 1533.

†† *Canon medicinæ*, l. iii. feu xx. tract. i. c. 2, p. 652. Basil., 1556.

‡‡ *Theizir*, lib. ii. tract. iv. c. 3, fol. 83. Lugd., 1531.

§§ *Liber. Theor. nec non Pract. Alsaharavii*, &c., tract. xxii. c. 2, 3, 4, fol. 95. Augsbourg, 1519.

||| For bibliographical notices, see *la Syphilis au moyen âge*, in the "Historical Notice."

¶¶ See Al. Luisinus, *Aphrodisiacus*.

then regarded soft chancre and suppurating buboes as symptoms of constitutional syphilis. At all events, even at that period, ulcers of the genitals, not accompanied by induration, were considered less serious.

Hunter, who, more than his predecessors, insisted upon the specific characters of indurated chancre, believed that there are primary symptoms which are not specific, and founded his belief upon the fact that they are aggravated by mercury. Adams and Abernethy developed the ideas of Hunter. Carmichael,* astonished to see all ulcers of the genitals confounded, despite their distinguishing appearance and characters, under the name of syphilis, proposes to call affections of the genitals resulting from impure connection *venereal diseases*, and to reserve the name of *syphilis* for the Hunterian chancre and consecutive affections. This bold syphilographer does not hesitate to admit a plurality of poisons:—" . . . It would be absurd to assert, as a general proposition" (these are his own words), "that the poison is always the same, and that the varieties of form which it assumes always depend upon the constitution of the individual. . . . If the plurality of the poisons is demonstrated by the varieties of the primary lesion, it is so also by the great number of the constitutional eruptions."

Carmichael, however, regards as truly syphilitic, and requiring mercury for their treatment, only indurated chancres and their constitutional sequelæ.

Ricord† distinguishes simple chancre from indurated chancre and secondary affections, for which he also reserves mercurial treatment.

In 1852, Bassereau, appealing at the same time to clinical observation and to imposing historical considerations, admits two distinct kinds of chancre, the one *indurated*, and generally followed by other symptoms, the other not *indurated*, an affection purely *local*. Then, by the aid of repeated confrontation of the patients infected with those who had given them the disease, he succeeded in proving that each of these lesions resulted from a chancre of the same kind.‡

* *An essay on the venereal diseases*. London, 1825.

† *Traité pratique des maladies vénériennes, ou Recherches critiques et expérimentales sur l'inoculation*. Paris, 1838.

‡ *Traité des affections cutanées, &c.*

At a later period, and by the same method, Clerc * and A. Fournier † show that soft chancre is transmitted solely in the same form. But while this lesion is always inoculable in the subject of it, Fournier, ‡ Puche, Poisson, and Nadan arrived, by means of numerous inoculations, at the conclusion that indurated chancre is not auto-inoculable more than twice in a hundred times.

Experiments performed by Rollet and Laroyenne, § gave a result little different, namely, six per cent. Prepossessed by this exception to the rule, and desirous of ascertaining whether it was really in the form of a syphilitic ulcer that the lesion became inoculated in the same subject, Rollet recognised, contrarily to what we learn from the results of artificial syphilitic inoculation in uninfected subjects, that in persons contaminated by soft chancre there is never any period of incubation, and that the result of the inoculation always manifests itself primarily by a pustule. Then arose the question whether the syphilitic chancres thus inoculable were not a mixture of simple chancre and infecting chancre, and the idea of *mixed chancre* was conceived. This lesion, of which we have spoken already, evidently cannot constitute a new species; but it is nevertheless important to know it, as it serves to explain satisfactorily a certain number of facts apparently exceptional or contradictory.

Clinical portion.—(a) *Seat and relative frequency.*—Any point of the body may become the seat of a soft chancre; but as the genital organs are, more than other regions, exposed to the contact of the virulent matter, so also are they most frequently affected. In men it is the glans and the prepuce; in women the internal surface of the labia majora et minora. In two hundred and twenty-two observations taken promiscuously by Melchior Robert, a hundred and eighty-eight presented chancres situated in the region of the genital organs, twenty-five without that region, and nine doubtful cases. Until recently, no well authenticated facts were known concerning the occurrence of this lesion upon the head. In 1857 Rollet inoculated the pus of a soft chancre on the mastoid process of an old

* *Moniteur des hôpitaux*, 1854.

† *De la contagion syphilitique*. Paris, 1857. Compare Thèses inaugurales de Dron, *du double virus syphilitique*. Paris, 1856; et Chaballier, *Preuves historiques de la pluralité des maladies vénériennes*. Paris, 1860.

‡ *Leçons sur le chancre, professées par Ricord*.

Rollet, *loc. cit.*, p. 105.

man affected with cancer, and obtained two ulcers which presented all the characters of the former lesion. These ulcers were obliterated on the seventh day; no constitutional symptom was seen to follow them.*

In 1858 Huebbenet, of Kieff, also inoculated an individual free from syphilis with the pus of a simple chancre; a soft ulcer with suppurating bubo was the consequence.† Lastly, Bassereau, Buzenet,‡ Puche, Nadan des Islets,§ and Melchior Robert transplanted at will the pus of simple chancre in various regions of the face, where nothing but indurated chancre had previously been observed.

Thus it can no longer be doubted that the soft variety of chancreous ulcer can be produced artificially in the cephalic region. The fact is incontestable; but why is this chancre so rarely seen on the face? It is difficult to believe that it is only a question of ground, and we are inclined to think, with Rollet, that indurated chancre is much more frequent on the head because it most usually has for its cause the secondary lesions so common on the face.

Statistics prove clearly that soft chancre is much more frequently observed than indurated chancre. Amongst 10,000 chancres, Puche found—

Indurated chancres . . .	1,955
Soft chancres . . .	8,045

Amongst 341 chancres, Fournier observed—

Indurated chancres . . .	126
Soft chancres . . .	215

(b) *Objective characters.*—The numerous cases of inoculation of soft chancre have admitted of observing and following exactly the different phases of its evolution. Unlike indurated chancre, it develops itself generally in a very short time, at the end of two or three days. Usually, in the first twenty-four hours, the point of puncture becomes red and surrounded by a small circle of inflammation, then slight tumefaction supervenes, a vesicular pustule

* *Gaz. méd. de Lyon*, 31st Dec., 1857.

† *Recherches et expériences sur la syphilis*, mémoire lu à la Société des médecins de Kieff. *Union méd.*, 1858, p. 233. *Die Beobachtung und das Experiment in der Syphilis*. Leipzig, 1859.

‡ Thèse de Paris, 1858.

§ *De l'inoculation du chancre mou à la région céphalique*. Thèse de Paris, 1858.

appears, and, finally, a pustule analogous to that of ecthyma. This mode of development, which belongs most generally to artificial inoculations, is also observed after an impure connection.

To this first condition succeeds an ulcer more or less deep, which occupies the whole thickness, or only a part of the mucous membrane, or the skin, and the exact characters of which it is important to point out. It is most commonly rounded in shape, despite a marked tendency to invade the neighbouring tissues: its extent varies from several millimeters to a few centimeters; its edges are cleanly cut perpendicularly, as if with a punch, and sometimes everted. Examined with a magnifying-glass, they present small indentations, which surround a red inflamed circle. The floor of the ulcer is uneven, covered with a yellowish or greyish matter, which is dirty, and more or less thick, and composed, to a great extent, of pus. This fluid, secreted abundantly, is virulent and contagious in the highest degree to the moment at which the sore becomes modified, and cicatrization takes place.

The base of a soft chancre generally presents the same suppleness as the neighbouring tissues; and if it is sometimes the seat of a puffiness more or less resistant to the touch, it never, at least, presents the elastic, indolent, chondroid induration of infecting chancre. Certain topical applications to the surface of this ulcer may nevertheless modify the characters of induration of the base, and become a source of error with which it is well to be acquainted.

The consistence, form, and extent of soft chancre are, moreover, susceptible of variation, either according to the seat of the evil, or by virtue of conditions peculiar to the individual, and then one pathognomonic sign persists, *i.e.*, the inoculability, in the same subject, of the product of secretion.

Soft chancre is most commonly multiple at the outset, or, if single at first, multiplies itself afterwards by successive inoculations. Some patients have presented as many as fifteen or twenty chancres of this kind; indeed it may be inoculated *ad libitum*; thus Lindmann effected in his own person more than 2,200 primary inoculations (Ricord).

In 254 cases of simple chancre, Ricord * found—

Single simple chancre	.	.	48
Multiple simple chancre	.	.	206

* *Leçons sur le chancre*, 2^e édit., p. 34.

This form of chancre does not necessarily react upon the glands; and the absence of glandular complications is to be regarded as one of its most important characteristics; and if, sometimes, the lymphatic glands do not escape its influence, a single gland is usually affected, which becomes painful from the first, and presents all the characters of a suppurative phlegmasia.

Course, duration, and termination.—The course of simple chancre is continuous and progressive; there is a tendency to invade and destroy the neighbouring tissues, and consequently to burrow more and more. After a certain time, difficult to fix precisely—but which seldom exceeds the fourth week—the ulcer ceases to spread, its floor becomes clean, its surface covered with red or pink granulations, which secrete a healthy yellow pus. The redness and swelling disappear, the contagious ulcer loses its specific characters, and becomes transformed into a simple sore; then cicatrisation soon takes place, which proceeds from the circumference towards the centre, and leaves a white cicatrix, more or less depressed, without induration.

Complications.—More frequent in the case of soft chancre than in that of indurated chancre, the complications are always inflammation, phagedæna, and gangrene, besides certain pultaceous products, to which the name of diphtheritis has been incorrectly given.

Simple inflammation is not of importance in general, except on account of the induration it occasions at the base of the chancre, and the mistakes which may result from it. Careful observation, the information furnished by the patient, the absence of multiple, indolent glandular swellings, and the rapid disappearance of the induration, will come to aid the diagnosis.

Gangrene usually shows itself during the first days of the existence of the chancre. A red circle, more or less bright in colour, surrounds the ulcer, the surface becomes tumefied, and covered with small brownish points, it secretes a dirty or rusty pus, the circle becomes deeper and deeper, the parts included in it assume a grey or brownish tint, and finally become detached. The more or less thick slough includes sometimes only a portion of the prepuce, sometimes part of the gland, and leaves considerable destruction of the parts behind it.

The *phagedæna* which complicates soft chancre differs less by its characters than by its extent from that which sometimes supervenes in cases of indurated chancre. The ulceration, in this case, is not

always confined to the sub-cutaneous cellular tissue, but extends in depth as well as superficially, laying bare the aponeuroses, the vessels, the nerves, and even the bony tissue.

Phymosis may be added to either of these conditions; the mucous membrane and the skin are red and excoriated, the suppuration is abundant, and the part very painful when touched. *Paraphymosis* also occurs, in some cases, as a complication of soft chancre.

"The diphtheritic and pultaceous condition," says Melchior Robert (p. 333), "presents itself under two forms: the pultaceous and the pseudo-membranous form, both proceeding from a like cause, and capable of occurring together on the same sore. This, in the first of these forms, presents a striking analogy with hospital gangrene, and, in fact, pultaceous chancres differ little from wounds complicated with that gangrene. The floor of the ulcer is yellowish, tomentose, covered with pulpy matter mixed with bloody stræ. Its irregular edges are of a violet tint, the neighbouring tissues are œdematous; at the same time the patient feels pains, loses his appetite, and has fever, which is frequently intense. In the pseudo-membranous form, the ulcer is covered with a false membrane, more or less closely adherent. It looks yellow, and secretes only a small quantity of serous matter. Thickened and dried in some cases, the morbid product adheres closely to the floor of the sore, which may remain stationary for a long time, without either spreading or diminishing in size. Alkalies affect this product of secretion, which undergoes generally, under the influence of acids, only a simple shrivelling. The presence of membranous or pultaceous products on the surface of a chancre very often renders the latter insensible to external agents, and even to cauterisation."

Here ends the nosographic study of soft chancre, which we have purposely placed side by side with that of hard, non-suppurating chancre (primary lesion). We know these two lesions, with their analogies and their differences, and the moment has thus arrived for seeking to ascertain the relation which may unite them. Does a causal relation exist between *soft chancre* and *sypilis*? Is this chancre an affection distinct and entirely separable from that disease? Such is the question, pregnant with disputes and difficulties, which naturally presents itself for examination, and of which the solution, although not wanting in importance, is, however, of doctrinal rather than practical interest.

We have two doctrines before us, that of the *duality* and that of the *unity* of the virus of syphilis, both of which have the pretension of resting upon experiment and clinical observation.

The advocates of duality, *i.e.*, of the independence of the two diseases, invoke in support of their opinion a marked difference in the symptoms, course, and evolution of the two orders of lesions, and infer therefrom a difference in the nature of them. As regards their origin, each of these diseases is transmitted in kind; as regards incubation, while the local lesion of syphilis does not manifest itself in less than two or three weeks, soft chancre appears, so to speak, immediately after contagion. The latter begins with a vesicopustule, shows itself in the form of a deep ulcer, with jagged perpendicular edges, and is never accompanied by specific induration: it is reinoculable indefinitely in the subject of it; the former commences with a papular protuberance, assumes the characters of an ulcer, the edges of which are but slightly sensitive and curve inwards, is always accompanied by a specific induration, and is not reinoculable. Soft chancre causes acute, phlegmonous inflammation of the glands or lymphatics, which generally suppurate, and sometimes furnish a pus which is inoculable; syphilitic chancre always coexists with multiple, indolent, hard, elastic swellings of the glands, which have no tendency to suppuration. Lastly, soft chancre is never followed by constitutional infection.

It is evidently impossible to deny the importance of these differences, a certain number of which are admitted even by the advocates of unity. The latter assert, however, in support of their view, that soft chancre is sometimes followed by constitutional syphilis, and that if, in most cases, it is transmitted in kind, it may happen to engender the initial lesion of syphilis, and *vice versâ*. Let us examine each of these points in succession.

1. *Soft chancre is sometimes followed by constitutional syphilis.*—The facts adduced in support of this assertion are unfortunately incomplete, and too little detailed to be conclusive; in fact, the authors, instead of making known the characters of this chancre, content themselves with saying, most frequently, like Melchior Robert,* that this lesion, which they accuse of having caused syphilis, did not present the characteristic *induration*. No doubt this character, which is a most important one, being absent, we must make allow-

* *Nouveau Traité des maladies vénériennes*, 1861, p. 560.

ance therefor; but this does not, nevertheless, suffice to justify the assertion that the ulcer is of a non-syphilitic nature, because the induration is sometimes difficult to ascertain. We would accept this assertion if, along with the mere statement of the absence of induration, the authors described the minutest details of the incriminated ulcer.

2. *Soft chancre is capable of transmitting an indurated chancre.*—The facts * adduced in favour of this doctrine, though few in number, do not escape the same reproach of paucity of details; for if they indicate the existence of a simple chancre, of a chancre without induration, there is no mention of the precise characters of this lesion, and, in short, nothing proves that, in those cases, it is a question of a soft chancre, *i.e.*, a deep ulcer with perpendicular edges, &c., rather than, for instance, a chancrous erosion. Instead of attaching too absolute an importance to induration, and of being content with signalling the absence of that symptom, it would be preferable, in our opinion, in advocating the doctrine of unity, to give an exact description of the lesion observed; soft chancre presents, in fact, characters more precise and specific, perhaps, than those of indurated chancre. Facts which do not offer these guarantees of their exactness, have no value as proofs. Indeed, before accepting the hypothesis of the production of an indurated chancre from soft chancre, we must first discuss the question whether the contagious lesion was not a mixed chancre.

3. *Soft chancre may originate in indurated chancre.*—This last proposition deserves, we think, a much more serious examination than the two preceding ones; upon it principally turns, at the present day, the doctrine of unity. Clinical and experimental facts come in here; let us see what value is to be attached to them.

Taking into account the difficulty of observation on such a point, it will be admitted that clinical facts are undoubtedly of less importance than experimental facts, and that they possess an absolute value only in so far as they are capable of being reproduced at the point of the lancet. Here are two of the principal ones which appear to tell in favour of the doctrine of unity:—

* For the majority of these facts, see *Traité des maladies vénériennes* de Langlebert, p. 344.

M. D., aged 18, whose sole venereal antecedent was a common gonorrhœa, took from the only woman with whom he had connection, simple chancres situated on the border of the prepuce, with subacute bubo in one groin. The woman, on examination, presented chancres with a slightly swelled base, an exanthematous eruption, nocturnal pains in the scalp, and afterwards, in spite of treatment, a palmar eruption and impetiginous crusts. As regards the young man, his chancres continued soft; he underwent no treatment, and had no symptom of constitutional syphilis. (Melchior Robert, *Faits et considérations à l'appui de l'unicité du virus chancreux*, broch. in 8°, Marseille, 1859).

Mrs. R. had, after an unnatural connection, seven chancres situated around the anus, large, with a greyish floor, irregular, and notched edges, surrounded by a circle of inflammation, and presenting all the symptoms of serpiginous phagedænic chancres. This patient had never had constitutional syphilis, and has not since shown any symptom of it.

The husband, who was the source of the contamination, had an indurated chancre, with bubo, in both groins, and has since had, in spite of treatment, several severe constitutional symptoms (*ibid.*, p. 116).

Facts similar to the preceding have been published by Langlebert,* Rey,† and Cullerier.‡

If these facts are exact and well observed, experiment ought necessarily to furnish identical results. How far has it served as a check? H. Lee § succeeded, in England, by the aid of blisters and powdered savine, in rendering auto-inoculable, syphilitic ulcers (indurated chancres) which had previously not been inoculable in the subject of them. The lesion he produced was not an indurated chancre; but was it a soft chancre, as has been asserted? I do not think so, because the experimenter in question simply records the appearance of vesico-pustules which, inoculated anew, gave rise to transient symptoms, which did not manifest any marked tendency to ulceration. In Norway, Boeck,|| of Christiania, Bidentkap,¶ his pupil, and Hjort, assert that it is possible to produce soft chancre by means of the modified secretion of indurated chancre; but the

* *Loc. cit.*, pp. 351 et 356, obs. v. et obs. xi.

† *Annuaire de la syphilis*, 1859, p. 83. Lyon.

‡ *Précis iconographique des maladies vénériennes*, p. 35.

§ *Lectures on syphilitic inoculation. The Lancet*, Sept. 13th, 1862, p. 275.

|| *Recherches sur la syphilis*. Christiania, 1862, p. 65.

¶ *Aperçu des différentes méthodes de traitement employées à l'hôpital de Christiania contre la syphilis constitutionnelle*. Christiania, 1863; et *Gaz. des hôpitaux*, p. 535, 1864.

facts which they give in support of this assertion do not appear fitted to carry conviction, and there is nothing to prove that, in certain cases, they were not mistaken as to the real nature of the lesion which served as the starting-point of their experiments. Neither is it more clearly proved that all the symptoms which resulted from their experiments are to be regarded as identical with soft chancre. The same experiments, moreover, repeated by Bidenkap himself, at the Hospital du Midi, in Follin's wards, did not produce any of the results announced.

The experiments performed in France by Melchior Robert are liable to the same objections as those of the Swedish physicians. But these objections vanish in part, it will be said, before the facts related by H. Kobner. That experimenter succeeded in inoculating upon the same subject not only the secretion of chancres, but that of mucous patches. Here, it is true, it is not probable that there was any error in diagnosis concerning the nature of the lesion which served for the inoculation. At the same time, if we examine the observations of Kobner,* it is difficult to recognise soft chancre, with all its characteristics, in the results of the inoculations performed by that author. The pustules which he succeeded in producing do not appear to have more than a slight analogy with soft chancre; and if they were sometimes capable of reinoculation, so as to produce ulcers more or less deep, they never presented either the totality of the characters or the evolution of a chancre, so that nothing authorises us to regard these products of inoculation as identical with soft chancre, the more so as it is by no means improbable that any kind of irritant fluid, especially pus, would produce, in individuals affected with secondary syphilis particularly, anatomical changes of the nature of those in question. Experiment must at least be practised if we would arrive at a positive solution of the question.† To conclude, the clinical facts which tend to prove that soft chancre may proceed

* *Klinische und experimentelle Mittheilungen aus der Dermatologie und Syphilidologie.* Erlangen, 1864, p. 77 et seq.

† This experiment has now been made. A distinguished syphilographer of London, H. Lee, has succeeded, by the inoculation of common pus taken from an infant, in producing in a syphilitic subject a pustule which continued more than fifteen days, surrounded by a red circle, and perfectly similar to that obtained by inoculation from suppurating chancre. (*Medico-Chirurgical Society of London, and Gaz. des hôpitaux*, 1867, p. 366.)

from indurated chancre, or from any syphilitic lesion whatever, have not as yet received the sanction of experiment, and consequently it is not possible to draw strict inferences from them.

In the question at issue, analogy has not failed to be used as an argument, but its importance here is, after all, not great. We will confess, however, that we were for a moment disposed to accept the doctrine of unity, after a comparative examination of the virulent diseases, which, symptomatically, most resemble syphilis. We had been struck by the fact that in small-pox, * cow-pox or *vaccinia*, † and theriot, ‡ there exists, side by side with the true initial pustule, a false pustule, different to the preceding, both by its objective characters and by the duration of its incubation, as also by its evolution; but a careful examination of these false pustules has failed to convince us that they constitute a special lesion, indefinitely transmissible by inoculation, like soft chancre; they appear to us to be nothing more than the result of the introduction under the skin of an irritant substance, a result analogous to that obtained by the inoculation of mucous patches and of suppurating indurated chancre.

From this whole discussion, necessitated by the actual state of our relative knowledge of the subject before us, we may draw the following conclusions:—

1. It is not proved that a simple deep ulcer, with perpendicular edges, in a word, a genuine soft chancre, has been, in any case, the initial lesion of constitutional syphilis.

2. It is not proved either, that this same affection has ever transmitted an indurated chancre and syphilis.

3. Lastly, clinical observations which tend to show that, under certain conditions, soft chancre may proceed from indurated chancre, not having yet been confirmed by experiment, we do not feel authorised to recognise the existence of a real relation between soft chancre and syphilis.

* Gandocher de Foligny, *Traité pratique de l'inoculation*, p. 318. Nancy et Paris, 1768.

† Citation de Jenner, par Husson, dans *Recherches historiques et médicales sur la vaccine*. Paris, 1803. *Rapport sur la vaccine*, par la Commission méd.-chir. de Milan, trad. de Heurteloup, p. 21. Paris, 1802.

‡ See Hurtrel d'Arboval, *Traité de la clavelée, de la vaccination et de la clavelisation des bêtes à laine*, § vi. p. 231. Paris, 1822.

We are aware that the experiments of which we have just been speaking are now being made again. What the results of this new experimentation will be we do not know, but if it be clearly proved that the syphilitic poison is susceptible of being modified, and degenerating in such a manner as, under certain conditions, to be capable of producing soft chancre, we will at once become partisans of the doctrine of unity. Meanwhile, we shall continue to believe that the list of syphilitic diseases should comprise three orders of disease, three distinct species, if we may so speak, which are—*Gonorrhœa*, *Chancre*, and *Syphilis*.

§ 2. *Buboes and lymphangites.*

Jos. Hermann, Die syphil. Drüsenerkrankung. Wien, Med. Halle, iv. 40, 41, 43, 48, 49. *A. Baraüller*, De l'adénopathie vénérienne. Thèse de Paris, 1854. *Émile Salneuve*, De la valeur sémilogique des affections ganglionnaires. Thèse de Paris, 1852. *Delpech*, Des bubons vénériens. Thèse de Montpellier, 1855. *Reboul*, Des adénites veneriennes. Thèse de Paris, 1857. *Nayrand*, Des adénites inguinales et de leur importance dans l'étude des maladies vénériennes. Thèse de Paris, 1862. *Sigmund*, Die chronische Schwellung der Lymphdrüsen bei Syphilis in pathologischer und therapeutischer Beziehung. Wien, Med. Wochenschrift, Nos. 22, 23, 25, 1859. See also various works mentioned above, in the Bibliography of chancre.

A. Buboes.—By the word bubo (βουβών, the groin) is to be understood a change, with swellings in the lymphatic ganglia. This name, which we retain solely on account of its antiquity, will frequently be replaced in the course of this work by the word *adenopathy*, which appears preferable, as it indicates more exactly what organ is affected.

Each period of the disease with which we are occupied has its special buboes; deep and visceral in the last, they are superficial or sub-cutaneous in the two periods of general eruption and local eruption; with this difference, however, that in the latter, instead of becoming general, they remain confined to the lymphatic region, which corresponds to the primary lesion. It is of the latter solely that we are about to speak.

In the Middle Ages,* and even in ancient times, suppurating bubo, and the coexistence of abscesses in the groin with ulcers of the

* Guillaume de Salicet, *loc. cit.* See Historique, p. 16.

genital organs, were known; but the indolent buboes of syphilis appear to have been almost entirely ignored until the end of the fifteenth century. Gaspard Torella gives one of the first descriptions, perhaps, of an affection of the lymphatic system concomitant with indurated chancre. It is that of a man who, after connection with a diseased woman, observed upon his penis a virulent, ill-conditioned ulcer, accompanied by an induration, which extended, like the spokes of a wheel, towards the groins. Villalobos (1498) makes mention of inguinal adenitis. Marcellus of Como speaks of it as follows:—"Ego Marcellus Cumanus infinitos bubones causatos ex pustulis virgæ et ex nimia fatigatione et labore curavi."* But at that period, and for some years afterwards, suppurating bubo was not generally regarded as a manifestation of the French disease. Nicolas Massa was one of the first to look upon it as a symptom of that disease. Nevertheless, as Bassereau remarks, it did not escape the observation of that inquirer, that the ulcers which are followed by suppurating buboes are not usually those after which the phenomena of consecutive infection are seen to develop themselves. "There often appear upon the penis," says Massa, "ill-conditioned, callous, obstinate ulcers, with pustules about the genitals; these are followed by swellings in the groins, which carry off the disease, especially if they suppurate from the commencement."

Ant. Lecoq,† who holds the same views, speaks still more explicitly on this point:—"The poison," he says, "sometimes attacks the groins and causes the glands to swell; if the tumour *suppurate*, this is often an advantage. This disease is called bubo."

The same idea, and the distinction which it sets up, are met with in the writings of many authors of that period, and particularly in those of Thierry de Héry and Ambr. Paré.‡ Thierry de Héry was not only aware of the semeiotic value of suppurating bubo, but also knew the pathological signification of hard, indolent bubo:—"It is very true," he says,§ "that the most certain signs of pox are when, after or during the existence of ulcers of the genitals (especially if

* *Aphrodisiacus* de Gruner, p. 52, obs. vii.

† *De ligno sancto non permiscendo opus*, cap. i., in *Aphrodis.*, p. 462. Paris, 1540.

‡ *Ouvres complètes*, édition Malgaigne. Paris, 1840.

§ *Méthode curatoire de la maladie vénérienne*, édition de 1660, p. 33.

they are callous and hard at the base), tumours appear in the groins, which go away again *without suppurating*."

In like manner Guillaume Rondelet also writes, that retrocedent or indurated buboes, not having a tendency to suppuration, are certain signs of imminent general syphilis:—"Si qui dolores omoplate, clavicularum et sterni patiantur, præcesseritque exulceratio in mentula intra vel extra, et bubones venerei, qui non profluxerint, sed retrocesserint vel indurati sint, eos morbo gallico laborare certo, et intrepide, etiamsi negent, affirmare possumus." * Starting from that period, buboes continued to be described by most syphilographers, but too often, perhaps, they do not take into account sufficiently the important distinction established by their predecessors, and the progress made.

"Venereal buboes," says Astruc,† "are painful, hard, resistant tumours of the lymphatic glands of the groins, which do not readily suppurate, and are produced, mediately or immediately, from an impure connection."

This author recognises phlegmonous, œdematous, and schirrous buboes, according as their form is inflammatory, œdematous, or one of indolent induration. Swediaur establishes an important distinction between *idiopathic* and *sympathetic* buboes. The former are produced by the mediate or immediate absorption of the venereal virus, while the latter proceed simply from the irritation which exists at the extremity of the lymphatic vessels. He recognises, moreover, secondary buboes, or buboes produced by constitutional syphilis, and accepts buboes at the first onset (le bubon d'emblée).

Lagneau divides buboes into primary, consecutive or secondary, and constitutional. Lastly, Ricord, like the ancient physicians, distinguishes the sympathetic or virulent bubo of soft chancre from the hard and indolent bubo which belongs to indurated chancre, and this distinction, justly accepted by most modern syphilographers, appears to us perfectly correct. Thus the glandular affections (adénopathies) which accompany the changes described above, present themselves under three forms:—

1. Simple adenitis; 2. Virulent or absorbent adenitis; 3. Mixed or indurated adenopathy.

* *De morbo gallico, & de signis morbi gallici incipientis*, in *Aphrodisiac.*, p. 938.

† *Traité des malad. vénér.*, édit. Louis, 1777, p. 253.

1. *Simple adenitis (sympathetic bubo).*—Without any connection with the syphilitic disease, unless it be by the slight sore proper to the primary lesion, simple acute adenopathy is comparatively more frequent as a consecutive phenomenon in cases of soft chancre; and this is easily conceived when we remember that this chancre consists in an ulcer of large extent, altogether favourable to absorption, while the initial lesion of syphilis, often scarcely ulcerated and not suppurating at all, is little fitted for absorption.

It is, in general, during the existence of the chancre that this form of adenitis manifests itself, but sometimes at a period sufficiently remote to render it difficult to find any vestige of that lesion.

In any case, it does not differ materially from common adenitis; sometimes all the glands of one or both sides feel the influence of the cause of irritation, the enlarged glands give to the touch the sensation of small rounded or oval bodies, moving freely under the skin, and there the change ceases. Sometimes a single gland, in more direct communication, no doubt, with the diseased point, swells more and more, until it becomes twice or thrice the natural size, pushing aside and effacing those around it; being painful, it causes more or less inconvenience, and is accompanied by gastric irritation and a febrile condition more or less intense. Under these circumstances the skin remains unaffected and resolution takes place, or else, becoming red and congested, it ends by adhering closely to the gland; the latter offers less resistance towards the centre, the epidermis becomes detached, the skin mottled, and breaks to give exit to the pus, unless an artificial opening be made. Sometimes, after one of the glands has suppurated, one or more other lymphatic glands take to suppurating in the same way, which causes a complication, the more troublesome because these different foci form sub-cutaneous communications with each other, and keep up an abundant suppuration difficult to stop.

This adenopathy is the only one which is observed independently of a local lesion, and it is to it, therefore, that is to be ascribed the bubo at the first onset (*bubon d'emblée*).

Bubo at the first onset.—This name is given to a glandular affection of the groin, supervening independently of any affection of the genitals. The subject of discussions, more or less warm, bubo at the first onset, of which Hunter admitted the existence, has had for its chief supporters in recent times Lagneau, Vidal de Cassis, and Castelnau.

Lagneau has sought to show that this lesion is not of recent date, but the facts which he adduces in support of this view, borrowed from Astruc, Fallopius, Swediaur, and Brandi, are far from having a strict scientific value. Vidal believes in bubo at the first onset, of which he quotes instances, and reminds us of facts observed by Reynaud de Toulon and Gibert.* Mordret du Mans,† Bertrand,‡ Schutzenberger,§ and Baumès,|| have published cases which tend to prove the reality of this kind of lesion. Castelnau,¶ in a profound study of the subject, makes known three new cases. The facts which he relates are unfortunately open to discussion, either because the examination of the genital organs was incomplete or deferred too long, or because the antecedents of the patients were not carefully stated. At the same time it cannot be denied that venereal buboes exist without preliminary chancre.

Diday,** after a critical examination of the theory of buboes at the first onset, admits, on the strength of a considerable number of cases, that these lesions have no virulent character, that their incubation is long and their duration about a month; they are accompanied by an inflammation which is always slight, and a feverishness and feeling of discomfort comparatively intense. But it is plain enough that all these characters do not differ from those of simple adenitis; the bubo in question is therefore nothing else than that affection without a preliminary ulcer, connected, no doubt, in many cases, with excessive coition, and similar to such as are observed after a forced march or a wound of some kind.

2. *Virulent adenitis, adenopathy of soft chancre.*—Soft chancre most commonly runs through all its periods without exciting any sympathy in the neighbouring glands; in a certain number of cases, however, sixty-five times in 207 cases (Ricord), there supervenes in the course of this lesion, or soon after its disappearance, acute adenitis, essentially monoglandular, which almost always runs on to suppuration, and furnishes a virulent pus inoculable like that of the

* *Traité des maladies vénériennes*, 1855, p. 252.

† *Recueil périodique de la Société de médecine de Paris*, août, 1829.

‡ *Précis des maladies vénériennes*, t. i. p. 30.

§ *Mémoires de la Société médicale de Strasbourg*, t. i. p. 92.

|| *Précis théorique et pratique des maladies vénériennes*, t. i. p. 30.

¶ *Annales des maladies de la peau et de la syphilis*, t. ii. p. 38.

** *Nouvelles Doctrines sur la syphilis*, p. 136.

chancre which caused it. Soft ulcers of the frænum, the prepuce, and meatus are, by virtue of the great number of lymphatic vessels with which those regions are supplied, especially disposed to the development of this form of adenitis. Although it may occur at any period of the existence of the chancre, it does not usually show itself before the end of the first week, the chancres being lined, up to that time, by an inflamed tissue, which prevents absorption. Purely inflammatory at first, this adenopathy, according to some authors (Melchior Robert), does not undergo until later the contact of the poison absorbed, which transforms it into virulent adenitis. This would be a genuine superfetation in which the last germ developed itself to the detriment of the first.

The bubo in question, monoglandular whenever the chancre is single and does not occupy the median line, affects, as Hunter already observed, the superficial glands without ever reaching the deep lymphatic glands. The lymphatic vessels rarely become implicated; but if they sometimes undergo the action of the poison, they are observed to become inflamed at the same time as the cellular tissue in which they lie. Thence results a phlegmon, the opening of which leaves a wound, which soon puts on all the characters of soft chancre.

The inflammatory process in the gland generally proceeds with great rapidity, and ends, almost certainly, in suppuration. So far, virulent adenopathy differed but little from simple adenitis; but the abscess once open, the wound puts on, sooner or later, the characteristic appearance of the chancre from which it resulted; moreover, it presents the same properties of inoculation, and may undergo the same deviations. The pus which it secretes is, in fact, inoculable in the same degree as that of soft chancre.

The course of things is sometimes different, however, and the adenitis may, by its presence, give rise to a peripheric phlegmon, the pus of which is not inoculable. "I have met," says Ricord,* "with cases in which the infected glands, which constituted, as it were, virulent cysts, were dissected and laid bare by the destruction of the periphery by inflammation; I could, in such cases, inoculate the pus from the *periphery* without result, then open the gland, and obtain pus of a specific character." It is easy to conceive that if, under such circumstances, the opening of the collection of pus occur

* *Lettres sur la syphilis*, 3^e édit. Paris, 1863, p. 325.

spontaneously, the suppuration may not be inoculable at first, or so long as the shell of the gland remains entire.

The *diagnosis* of the adenitis which we are now considering is generally easy, on account of the usual nature of the walls of the focus of suppuration and neighbouring parts. We observe, in fact, that instead of contracting gradually, and showing a tendency to become cicatrised, as in simple adenitis, the opening becomes rounded, and enlarges itself in consequence of successive inoculations and a progressive ulceration, so as to assume, in certain cases, considerable dimensions. Either covered or not by a portion of skin pierced with holes, the floor of this ulcer generally presents a greyish aspect, and secretes a serous or bloody pus, which differs from the homogeneous suppuration of true phlegmon.

Most of the complications of soft chancre may occur in virulent bubo; one of the most frequent is *phagedena*, the ravages of which are so frightful, in certain cases, that the muscles, vessels, and nerves are laid bare, the limbs deprived of their cutaneous envelope, and the patients worn out by a suppuration too often impossible to check. Such is the bubo of soft chancre. Like the affection from which it results, this adenitis has, in an immense majority of cases, a character which indicates that there is no consecutive constitutional infection: in that respect it has a semeiotic signification directly opposed to that of the indolent bubo of syphilis.

3. *Indolent bubo, multiple, indolent, indurated, mixed adenopathies.*—*Specific bubo; true syphilitic bubo.*—The usual and, so to speak, necessary concomitant of the primary syphilitic lesion, this variety of adenopathy presents itself with peculiar characters, which fully justify the epithet specific, since they are observed in reality only during the course of the constitutional infection. It shows itself in a manner almost constant; for the cases in which it has failed to appear are very few, and it appears at the same time as the induration of the chancre, or rather in the first or second week from its commencement. Moreover, it is multiple, hard, indolent, not accompanied by inflammation, and if by chance one of the glands suppurate, the product of the suppuration is never inoculable.

The concomitant of each variety of the initial lesion of syphilis, this adenopathy varies in situation, and that always in connection with that of the lesion to which it is so closely related. In the groin, where it is most frequently met with, it may occupy both sides at once, on account, no doubt, of the crossing of the lymphatic

vessels at the median line in that region, for this double action does not usually take place with a chancre in another part of the body, at least unless situated very near the median line.

At first a simple glandular tension, indolent, and frequently unobserved by the patient, the specific bubo, when arrived at its complete development, consists in a comparatively slight, firm, remarkably hard swelling of one or, more frequently, of all the glands situated in the lymphatic region adjoining the local lesion. These glands then constitute so many small tumours, not larger than a filbert, rounded or oval, resistant, elastic, movable upon the parts near them, and independent one of the other. Situated beneath the skin, which retains its normal colour, and in healthy cellular tissue, these tumours, altogether indolent, recall to the finger which presses them the sensation communicated by the induration of syphilitic chancre. They are generally of the same size, but sometimes a larger gland is seen, in more direct connection with the initial lesion. This gland (the anatomical gland of Ricord), which occupies the centre, and around which the other glands form, as it were, so many satellites, is more specially inclined to suppurate when any cause supervenes to modify the surface of the primary ulcer, and *à fortiori*, when the latter itself passes into suppuration.

Therein is found a first cause of suppuration in syphilitic buboes, but it is not the only one; the constitution and habits of the patient are another cause thereof. Thus, in individuals of a strumous habit, the glands, instead of remaining small and hard, sometimes become enlarged and distinctly softer to the touch. Excessive coition, or forced marches, may equally change the nature of specific bubo; but in any case suppuration is so rare, that Melchior Robert* only observed it five times in thirty-three cases; and as the pus is not inoculable, the wound soon closes again. An exception is to be made, however, for the cases in which a soft chancre is inoculated upon a hard one, and for those in which the secretion of syphilitic chancre is modified by an irritant or by phagedæna. The coexistence of the two forms of lesion being possible, it will be intelligible that the different species of adenitis may present themselves simultaneously without exciting surprise. It follows equally that fixed and inexorable laws govern all these lesions, and if some have denied their strictness, it is simply because it has not always been possible

* *Nouveau Traité des maladies vénériennes.* Paris, 1861, p. 420.

to ascertain all the circumstances which give rise to what is too frequently termed an exception. Special circumstances and influences, altogether foreign to syphilis, being put aside, it is possible to show that specific bubo never suppurates.

Remarkable by its tenacity, this affection outlasts, in the majority of cases, the initial lesion ; it persists for months, or even years, after the cicatrisation of the latter, and is still observed when all trace of chancrous induration has long disappeared. This important circumstance is not devoid of practical utility, as it may put us on the track of concealed or unrecognised constitutional syphilis. Resolution is the usual termination of syphilitic bubo ; but it is not known whether, in such cases, the lymphatic glands always regain their normal functions.

In a *diagnostic* point of view, simple inflammatory adenitis not being, on account of its acute character, capable of being confounded with syphilitic bubo, strumous or cancerous affections of the glands are the only ones likely to occasion any difficulty of diagnosis. If secondary cancerous adenopathy does not offer any serious difficulty of diagnosis, the same cannot be said of cancer developed primarily in the glands ; but at all events that affection is rare, and distinguished, moreover, by its progressive course, the change of consistence, the pains of which it is the seat, and, at a certain period, by a peculiar mottled appearance, or by the ulceration of the skin which covers it, and the appearance and advance of the cancerous cachexia. The glandular affections of scrofula are chiefly observed in individuals endowed with a lymphatic temperament ; their favourite seat is the lymphatic glands of the cervical and sub-maxillary regions, rarely the inguinal glands ; they form masses more or less voluminous, consisting of an agglomeration of enlarged glands, mostly soft in consistence, with a tendency to non-inflammatory suppuration of long duration, generally followed by more or less extensive fistulous canals. Specific bubo is, in itself, without serious inconvenience ; but it must not be forgotten that it is the sure sign of a syphilitic infection.

B. Lymphangites.—The lymphatic vessels, which serve as the channel of communication between the initial lesion and the buboes, are not always exempt from a certain degree of change. They may present the various modifications which the glands themselves undergo, and thus there is ground for admitting—(1) simple lymphangitis ; (2) virulent lymphangitis ; (3) syphilitic lymphangitis.

Syphilitic lymphangitis alone merits attention. Well known since the writings of Sommering, Vacca Berlinghieri, Ricord, and Bassereau appeared, it is characterised by the presence of small, hard, indolent, elastic, knotty cords, swollen at some points, which follow the course of the lymphatic vessels and are movable under the skin, which remains sound in their neighbourhood. These cords, as Bassereau was enabled to convince himself in one case, are formed by the walls of the lymphatic vessels, thickened and indurated by adhesive inflammation analogous in all respects to that which the corresponding glands never fail to present. It is with reason, then, that the name of specific lymphangitis has been given to this affection. Its course is slow; its duration of several months; resolution is its usual termination; it never suppurates, except when some complication of the initial lesion occurs.

General condition of the economy in the course of the primary lesion.—The local lesions we have just been studying are not always the only disorders which the morbid syphilitic agent occasions in the organism. If it be true that in many cases individuals contaminated do not present any general disturbance, there are cases, however, in which the patients feel uneasiness, fatigue, lassitude, an unusual weakness, vague pains, palpitations, a marked discolouration of the skin, and a sensation of restlessness and melancholy. They even sometimes furnish to the ear of the observer a bellows murmur in the carotids, and all the symptoms of chloro-anæmia, including changes in the blood. The interesting researches of Ricord and Grassi have furnished important data on this point.* From these researches it follows that in the period of indurated chancre, whether accompanied by a syphilitic eruption or not, the blood undergoes a change expressed by a diminution in the amount of the globules, and an increase in the proportion of albumen. Instead of $\frac{1}{1000}$, which, according to Becquard and Rodier, is the mean proportion of blood globules in man, Grassi has shown that in the period of indurated chancre such a diminution occurs that this proportion did not exceed, in certain cases, $\frac{18.00}{1000}$. It was interesting to know what occurred in the blood of patients affected with simple chancres; but analysis of the blood in that condition has demonstrated the important fact that that fluid does not undergo any

* Voyez *Leçons sur le chancre*, rédigées par Alf. Fournier, p. 184, 2^e édit.

appreciable change. Consequently, in simple chancre, the blood remains pure; in indurated chancre it is more or less seriously vitiated. But upon what do these differences depend, and how are they to be interpreted in the actual state of our physiologico-pathological knowledge? This question, though difficult to solve, is, however, accessible; to discuss it here would be to expose ourselves to repetitions, and we prefer adjourning it to the chapter in which we shall occupy ourselves with the study of the changes in the vascular blood glands.

§ 3.—*Diagnosis and prognosis of syphilis at the period of local eruption.*

Diagnosis.—The various changes hitherto described being known, we must now endeavour to establish the bases for the diagnosis of syphilis. At this period, and in spite of the data which we possess, we must not hesitate to confess that this diagnosis often puzzles the most experienced practitioners. Are we to be surprised at this? By no means. Ought we to complain of it? Not entirely; for, in the majority of cases, it does not furnish any direct indication for therapeutic treatment.

The peculiar clinical characteristic of syphilitic chancre is the absence of suppuration during the whole time which precedes the period of reparation. Classified according to their diagnostic value, the essential characteristics of the primary lesion would occupy the following order:—

1. Inoculability, which is, in some sort, the pathognomonic characteristic.
2. The absence of suppuration, and the long duration of the ulcer.
3. Induration, accompanied by multiple, firm, and movable adenopathies.

There are here two symptoms of especial importance, and without the conjunction of which there can be no certainty, viz., the *induration* of the local lesion and the *polyglandular adenopathy*. The value of these symptoms did not escape the early syphilographers, since Louis Lobera wrote already, "There appear sometimes upon the penis hard and callous ulcers; this is a certain sign of the French disease, especially when there presents itself in the groin a swelling called bubo." But in the absence of either of these signs, are we justified in denying the existence of a syphilitic infection?

By no means. Chancres of the anus, the middle of the glans, and the vulvo-vaginal orifice present little or no induration, according to some authors, and yet they are often infecting. If then, despite the absence of induration in the local lesion, we observe a group of glands to be hard, elastic, chondroid, in the lymphatic region corresponding to that lesion, the existence of syphilis is still very probable; it may even be said that it is not doubtful when a slight, superficial ulceration, with a serous discharge only, has existed for a considerable time. If, on the contrary, the adenopathy is wanting, there are great probabilities in favour of a soft chancre and pseudo-syphilis, especially when the ulcer gains in depth rather than in extent. The probabilities may be said to be changed into certainty when a monoglandular, red, and suppurative adenitis supervenes.

There are special circumstances, however, which it is important to be acquainted with. If the ulcer be recent, and unaccompanied by reaction in the glands, it is evidently necessary to suspend our judgment, as we often soon see the specific adenopathy appear. On the other hand, we must know how to guard against the error to which mere induration may give rise. This phenomenon is sometimes, in fact, only the inflammatory complication of a simple chancre, resulting from the application of foreign caustic or astringent substances to the surface of the sore. The chancre once freed from those substances, the inflammatory tumefaction soon disappears, and the diagnosis, at a certain moment, ceases to be doubtful. Nevertheless there are cases in which, despite the most careful examination, we cannot venture upon a positive opinion; we must then wait before adopting active treatment. The appearance of general symptoms will soon come to dissipate our doubts, and point out the course to be adopted.

There are several affections which may simulate the primary lesion of syphilis. Workmen exposed to the action of arsenite of copper observe upon the penis ulcers very analogous to those of indurated chancre;* but similar ulcers are disseminated over other parts of the body; at their centre may be observed a characteristic greenish matter, and the indolent swellings of the glands are wanting.

* See Follin, *Note sur l'éruption papulo-ulcéreuse qu'on observe chez les ouvriers maniant le vert de Schœnfurt*, in *Archives de médecine*, December 1857.

Gummy tumours of small volume, isolated and ulcerated, simulate equally closely syphilitic chancre; but the absence in such a case of the specific adenopathy, and the evolution proper to the gummy product, will prevent confusion.

Nor will herpes be more likely to mislead. The multiplicity of the vesicles, the way in which they are grouped together, the pink colour of the ulcers which follow them, the absence of induration and indolent glandular sympathy, and the rapidity of healing, are so many circumstances which will serve to distinguish this affection from the chancreform erosion, the lesion with which it has the closest analogy. The same characters, with the exception of the induration, will save us from confounding chancre with furuncles of the labia majora.

It may happen, however, in the absence of syphilis, that we observe an isolated ulcer, with induration of the base, and one or more firm and movable glands in the corresponding lymphatic region. Under these circumstances, we shall recognise that we have not to deal with the primary lesion of syphilis, but with an epithelioma, if we take into account the progress of the local lesion, always slower in the cancrroid affection, in which, moreover, we never observe secondary phenomena, as in a chancre of long standing. The microscope may also be of use here.

But it is not enough to distinguish syphilis from what may simulate it. It is still more important to know how to distinguish true syphilis from false, the constitutional initial lesion from the purely local lesion; in this respect the following table, which sums up the characters proper to each of these morbid conditions, may be consulted with advantage:—

TRUE SYPHILIS (Primary lesion).	PSEUDO-SYPHILIS (Soft chancre).
Incubation of a mean duration of twenty-seven days.	Incubation null.
Lesion mostly single, not reinoculable on the subject of it.	Lesion generally multiple, indefinitely reinoculable on the subject of it.
Consisting in a papule of greater or less size, which erodes or ulcerates, but always forms a superficial ulcer, without detachment of the edges and without suppuration, unless it be in the period of cicatrization.	Showing itself in the form of a vesiculo-pustule, which terminates in a deep ulcer, with detached, perpendicular edges, and furnishes an abundant purulent secretion.

Almost always accompanied by firm, indolent, multiple, non-suppurating adenopathies.

Susceptible of being influenced by certain agents, such as proto-iodide of mercury, and iodide of potassium.

Accompanied in some cases only by an adenitis, which furnishes inculable pus.

Entirely unaffected by alteratives, if not aggravated by the administration of them.

Prognosis.—It is unnecessary to insist upon the various motives for regarding the prognosis of pseudo-syphilis, a purely local affection, as much less serious than that of true syphilis, which is essentially a general disease. But the existence of true syphilis being recognised, what indication for a prognosis can be drawn from the various forms of the first manifestation of that disease?

The infallible indication of a general infection, can the primary lesion, according to its objective characters, make known to us the degree of severity which the syphilis it reveals to us will eventually display? In other words, is there a constant relation between the form of this lesion and the severity of the consecutive manifestations?

This question, already ventilated by Carmichael and Rinecker, has been made by Bassereau the subject of interesting researches, which have enabled him to form, as it were, into a law, the following proposition:—"Benignant indurated chancres are followed by benignant eruptions and by affections of the various tissues not tending to suppuration. Phagedænic indurated chancres are followed by severe pustular eruptions, ulcerating affections of the skin, suppurating exostoses, necroses, and caries." Diday (p. 443), relying partly upon Bassereau's statistics, and partly upon his own practice, concludes that a true chancre corresponds to severe syphilis, and that with the chancriform erosion a mild form of syphilis may be looked for. Bazin points out the frequency of phagedænic chancre in malignant syphilis; and one of his pupils, Dubuc, remarks that out of nine cases of precocious malignant syphilitic eruption, in four the initial lesion has been a phagedænic chancre. He quotes, moreover, two cases observed by Verneuil, in which the same lesion marked the commencement. Langlebert regards chancre as the touchstone of the constitution. He thinks that from the action produced by this morbid influence upon the tissues it is easy to foresee the course of the consecutive affections which may manifest themselves, both early and remote. "The benignity of the

chancere will announce," he says, "constitutional symptoms of little severity; its malignity, on the contrary, will lead us to expect consecutive symptoms of much greater severity."

Starting with this fact, which, it appears to us, requires further proofs, the same author is inclined to believe that the intensity of the syphilis is in proportion to the quality of the poison inoculated; and adds, "If this were the case, we should then, perhaps, possess in this correlation an element for the solution of the great problem of syphilitic vaccination. In fact, if certain mild forms of syphilis depend exclusively upon the poison which produces them, I suspect that a new path would be opened, which might perhaps lead us to the end in view. The recent researches of M. Depaul on the nature of the so-called vaccine virus, which is nothing else than the varicellous poison itself weakened or modified, serve to a certain extent to justify these hopes."

On this point I shall venture to make a simple observation. At the time when variola was inoculated, I am not aware that anything was observed which would confirm these ingenious views. But however this may be, a new path of research is open, which cannot fail to furnish important results. In any case, it is not, we think, the modality proper to the primary lesion which renders the syphilis more or less severe; this lesion is subordinated to the general constitution of the patient, as are also the ulterior manifestations. And thus, from all these observations, a single fact would appear to be ascertained, viz., that the initial lesion of syphilis already points out the measure of susceptibility in the organism to the action of the syphilitic poison.

CHAPTER III.

PERIOD OF GENERAL ERUPTION, OTHERWISE CALLED SECONDARY AFFECTIONS.

Characters common to the affections of this period.—Instead of appearing in the form of a simple local lesion, syphilis now begins to show, in its manifestations, the tendency to generalisation and to a multiplicity of morbid forms, whence it has justly received the name of “Proteus,” which Fallopius was one of the first to give to it. After a period of time, which is very variable, from forty to fifty days after the appearance of the chancre, consequently sixty or seventy days after the introduction of the syphilitic poison, sixty-seven days after the first appearance of the primary lesion, according to an average of ninety-five cases made by Leudet,* sometimes also at the end of several months, new symptoms appear which, as well by the period at which they manifest themselves as by the totality of their characters, fairly constitute a distinct phase in the evolution of syphilis. These symptoms, which affect chiefly the most superficial parts of the skin and of the mucous membranes in the vicinity of the natural orifices, justify, we think, the denomination adopted above. It would be wrong, however, not to admit that this period is also marked by lesions more deeply seated, and of which the bones, the eyes, certain nerves, and perhaps the liver, are the most frequent seats. Such was not, however, the opinion of Hunter, who represented syphilis as a disease which advances, in its progressive course, from the periphery to the centre of the body, attacking the tegumentary membranes in the first period, and finishing by invading the fibrous tissues and the bones in the second; but the law framed by that author appears to us, as to Bassereau and Follin, to require modification to render it exact.

The symptoms in question are observed everywhere with very analogous, if not identical, characters, very different, at all events,

* *Gazette médicale de Paris*, p. 369, 1849.

from those which belong to the subsequent period. The anatomical change proper to these modifications bears, in fact, a stamp altogether peculiar; always confined to the most superficial layers, to the bark, so to speak, of the parts affected, it consists especially in a hyperæmia which runs a chronic course, sometimes accompanied by a serous or purulent exudation, but never by those products of the cellular tissue known under the denomination of *gummy tumours*. From its nature, as well as from its seat, this change leaves no trace of its passage; it is never, like the lesions which succeed it, followed by cicatrices, or by organic changes, and often coexists with superficial, hard, elastic, chondroid adenopathies. A no less important character of these lesions is their *generalisation*. They always, in fact, occupy several parts of the body at the same time; not only are they disseminated over the surface of the skin, but they frequently also attack simultaneously several of the organs—the muscles, the bones, the globe of the eye, the joints, &c. In these latter parts, the anatomical lesion still appears to present the characters peculiar to morbid affections of the external and internal tegument. Thus, in the joints, while later on it will assume the characters of white swelling, and most frequently continue localised in one knee, we now see it attack several joints at the same time, and simulate most closely acute arthritic rheumatism. The appearance in successive bursts, and the relapses, belong equally to these various manifestations, which have one other symptom in common, viz., that of being generally preceded or accompanied by febrile phenomena.

These affections are distinguished, moreover, at least those which furnish a product of secretion, by the possibility of inoculating that product. Further, the blood appears to be inoculable during the whole of the period in which hereditary transmission is still at its maximum. In addition to these peculiar qualities, the blood is the seat of modifications more or less extensive, but differing little from those which we have already pointed out when treating of the period of local eruption; for in truth it is only at the period of the appearance of the manifestations now in question, that the diminution of the red globules and the increase of albumen takes place. It is at this moment also that it is sometimes possible to ascertain an increase in the number of the white globules.

It would be possible, no doubt, to push these considerations further, and to render clearer the analogies between the lesions of the skin and of the viscera in this new phase; but we have already said

enough to show that syphilis, at this period, does not confine its action solely to the tegumentary membranes, as the majority of authors appear to suppose; and since this disease disseminates its effects over various organs, and is often preceded by febrile symptoms, it follows that we must pass successively in review—

The premonitory symptoms, or syphilitic fever.

The eruptions of the skin and mucous membranes; exanthematous, and enanthematous syphilides.

The usual concomitant changes in certain organs; secondary visceral affections.

Premonitory symptoms.—Syphilitic chlorosis.—Irruptive fever.—Syphilitic fever.

These symptoms did not escape the sagacity of the early syphilographers, who already looked upon them as certain signs of the general infection of the economy, "*Signa labis conceptæ*" (Fracastor).

Villalobos,* who, before Fracastor, wrote a poem which may vie in elegance with that of the latter, sums up as follows the symptoms which announce the approach of the disease:—"A small sore upon the penis, ill-conditioned, with hard edges, indolent; pains in the head, pallor of the face, a weight about the shoulders, sleeplessness, dreams, a dark circle round the eyes, dry lips, weakness in the limbs, general lassitude, indifference, indistinctness of vision; after the appearance of the pustules, pains in several of the joints. . . ."

Ambrose Paré has given us a sketch of these signs, too accurate to be omitted here:—"When the disease is recent," he says, "there appears an ulcer on the penis or vulva, tumours in the groins, scalding, with, sometimes, a stinking and very fetid discharge, which proceeds from ulcers of the meatus; *there are also pains in the joints, head, shoulders, and other parts, with weakness in the arms and legs, so that the patients say they feel as if they had been beaten all over with sticks, and are not able to walk or to raise their hands to their heads, except with great difficulty.* There supervene inflammation of the mouth, falling off of the hair of the head (called alopecia), of the

* *Sumario de la medicina*, &c. Salamanca, 1498. See Guardia, *La médecine à travers les siècles*. Paris, 1865, p. 218 et seq.

eyebrows and beard, with emaciation of the whole body, and great restlessness. It is to be remarked here, that these symptoms do not all appear in each patient, but only in some of them. The most certain are, when the patient has a malignant ulcer on the private parts, which is *callous, hard, and obstinate*; and while a certain hardness continues in the ulcer, especially on the penis, this indicates that there is syphilis to be eradicated, and tumours appear in the groins, which return within the body without suppurating.”—(*Livre xix. chap. iv.*)

At a period much nearer our own, Swediaur endeavours to distinguish these symptoms from those which succeed them, and expresses himself as follows :—“ Before the syphilitic poison existing in the system produces eruptions of the skin, or other visible effects in the body, the patients frequently experience extraordinary depression and languor; they sometimes feel erratic pains in all parts of the body, and shooting pains, from without inwards, in the long bones; frequently there is pain in the pericranium, as if the head were being compressed forcibly. When the pains do not become violent during the night, they merely cause restlessness and discomfort; they appear very different from those excruciating pains which attack the long bones in confirmed syphilis, and which produce thickening of the periosteum, or a genuine exostosis which is frequently followed by caries. The former are a species of vague pains, confined to the periosteum, or to the muscular, aponeurotic, or ligamentous surfaces, and are sometimes so slight, that they scarcely cause any complaint; but, even when more severe, they are evidently more supportable than the latter. In addition to these symptoms, the patients frequently feel weakness and lassitude, not only during the day, when they are up, but especially on rising in the morning. Neither sleep nor bed procures them any repose or refreshment. They are attacked by a kind of slow fever, with a weak and accelerated pulse, sunken eyes, and a livid circle round them; their shoulders and sides are painful; their physiognomy indicates a constitution harassed and undermined; in a word, the patient grows thin, and dwindles away sensibly.”*

Known, as we thus see, to the writers of the last centuries, the irruptive fever, described by Hecker and Morelli, has not perhaps, since that period, always received the attention of which it is worthy.

* *Traité des malad. vénér.*, t. ii. p. 101. Paris, 1801.

But in any case, Ricord, Bassereau, Gibert, Bazin, Hardy, have not omitted to speak of it. The lapse of time which occurs between the appearance of all these phenomena and the commencement of the eruption is usually from eight to ten days; but it may vary from a few days to two or three weeks. In the cases of the inoculation of syphilis, the premonitory phenomena have shown themselves from the sixty-fifth to the hundred and fiftieth day after the introduction of the syphilitic poison (observ. by Wallace, Waller, Rinecker); and everything tends to prove that there is not, in this respect, any notable difference as compared with acquired syphilis. In 199 cases of erythema observed by Bassereau, these symptoms existed 143 times, and showed themselves, as far as it was possible to determine, from the thirtieth to the ninetieth day after the impure contact. In sixty cases in which exact information could be obtained, MacCarthy forty times observed well-marked prodromata, twenty-one times nocturnal cephalalgia alone, eleven times cephalalgia and rheumatoid pains about the joints, and eight times the latter pains only. These disturbances, which generally precede the first cutaneous symptoms, usually cease when they appear, but sometimes persist, or even first appear, after the syphilitic eruption, and that in spite of mercurial treatment. They belong entirely to the lesions of the period we are studying, and, if they more frequently accompany syphilitic erythema, it is perhaps simply because that is the most frequent form of eruption. It is very rarely that they are altogether wanting, or do not differ somewhat according to individual proclivities.*

The following are those observed in the majority of cases: the features become changed, the face pale, the eyes surrounded by a dark circle, the physiognomy gloomy; the patient is melancholy, morose, taciturn, and loses flesh; at the same time he feels a lassitude and restlessness which unfit him for any kind of work, a sense of fatigue and weakness so great that walking becomes difficult and the legs bend under the weight of the body.

Intense cephalalgia is felt both night and day; it is general or partial, and sometimes limited to one of the frontal or temporal regions, as in one of our own observations, in which the patient complained of feeling as if being cut with a knife. It presents

* It is to be observed that syphilitic fever is more frequent and generally more intense in women than in men.

paroxysms, and may even take on the character of a periodical neuralgia; it is often accompanied by swimming in the head, vertigo, and giddiness, phenomena sometimes independent, and provoked especially by movements of the head upon the trunk.

Other pains also exist, no less troublesome to the patient; they are known under the name of *rheumatoid* pains. Carefully studied already by Bayr,* these pains, so sharply characterised by A. Paré, occupy the various parts of the osseo-fibrous system. The nape of the neck, the back, the loins, the costal parietes, the large joints (shoulders, elbows, knees), are the regions in which they most frequently occur. These pains are diffused rather than circumscribed, and being more severe during the night, generally remit in the morning. Undergoing a kind of intermission, they manifest towards evening paroxysms which are exasperated by the warmth of the bed; but one of their chief characters is their mobility, for they frequently disappear from one part of the body to reappear in another. More fixed in certain cases, they take on the character of lumbago, less frequently that of pleurodynia. Instead of aggravating them, pressure sometimes relieves them. In the sternum it is often possible to provoke them by the tips of the fingers, if not already existing spontaneously. For these reasons, and because they have their special seat in the upper or lower third of that bone, and rarely, if ever, in the middle third, they have had, with a certain show of reason, great value attached to them for diagnosis.† In consequence of these pains, motion becomes difficult, and then functional disorders supervene. It is thus that the joints are rendered stiff, rigid, numb to such a degree that complete extension and flexion may become impossible.

At the same time there is sleeplessness, sometimes prostration, or even a slight disturbance of the principal senses. The digestive functions are deranged, there is want of appetite, a bitter taste in the mouth, nausea, diarrhœa, in a word, most of the symptoms of gastric disturbance. On the other hand, Bassereau has observed in some cases increase of appetite and a desire to eat frequently, commencing some weeks after infection; the urine is changed, being sometimes red and febrile.

* *De doloribus musculorum ex morbo gallico genitis*, in *Aphrodisiaco*, p. 849.

† Brodrick, *Madras Med. Journ.*, and *Dublin Med. Press*, November 4th, 1863.

The breathing, which is shorter than natural, becomes accelerated on walking; the circulation is generally disturbed. The patients have palpitation of the heart, and sometimes epistaxis and œdema of the lower limbs; a soft, anæmic bellows murmur is heard at the heart and great vessels; in a word, we observe the signs of chloro-anæmia, and, in fact, Grassi's analyses have shown that these symptoms coincide with a diminution in the amount of the globules, which would date, as we know, from the appearance of the indurated chancre, even before any manifestation of secondary affections.

Genuine accessions of fever are frequently added to these symptoms; characterised by heat, followed by more or less copious sweats, these accessions usually return towards evening or during the night, and, in some cases, very closely resemble quotidian, tertian, or double tertian ague. Cardan, Baillou, J. Frank, and Werlhof, have even related cases of intermittent syphilitic fever.* At other times the fever is continuous, with paroxysms; and if there be cephalalgia, lumbago, nausea, dulness, stupor, epistaxis, it is easy to understand that it may present analogy with the commencement of small-pox, an eruptive fever, or still more, typhoid fever, when it happens to show itself some days before the syphilitic eruption.

The frequency of the pulse is not generally very considerable; it sometimes amounts, however, to 110 or even 120 pulsations. Guntz,† who has made researches into the state of the temperature in syphilitic fever, most generally observed 30°·4 Réaumur, and 29°·9 during the morning remission. In the course of the disease, and in the most severe cases, this observer has seen the thermometer go up to 31° Réaumur in the evening and stand at 30°·9 in the morning. The temperature always remained at that point for several days, or even for several weeks, before returning to the normal condition.

* Although several of the facts related in connection with this point may be questionable, we must acknowledge, however, that syphilitic fever has, in some cases, a great analogy with intermittent fevers. Boyer, p. 113, quotes a case of this kind. Compare Yvaren, *Métamorphoses de la syphilis*, p. 173; Swediaur, *loc. cit.*, p. 299. An unfortunate colleague, Hourmann, who fell a victim to infection contracted in the performance of his duty, presented general symptoms which closely resembled intermittent fever. (Cazenave, *Traité des syphilides*, 1843.)

† *Das syphilitische Fieber* (Varge's *Zeitschrift, neue Folge*, 11, 3, 123, 1863). Analysed in Schmidt's *Jahrbücher für gesammte Medizin*, t. 120, p. 195.

It may be assumed, in this respect, that the earlier and more abundant the eruption is, the more frequent will be the fever and the higher the temperature, and *vice versa*.

The totality of the symptoms in question is, according to Diday, less rare and more durable in women than in men, and is susceptible also, in the former, of extreme intensity. However this may be, we generally observe a more or less sudden diminution of the premonitory symptoms at the moment when the cutaneous affection shows itself; the latter would appear to concentrate all the efforts of the economy; but often, instead of disappearing, these manifestations persist, or even become aggravated, during the first two or three weeks of the syphilitic eruption.

Affections differing greatly from each other may be confounded either with this whole suite of prodromata, or with some only of the principal phenomena belonging to it; before the eruption, it is, as we know, intermittent fever, typhoid fever, gastric derangement, certain forms of cephalalgia,* or even neuralgia; at the moment of the appearance of the eruption, most of the eruptive fevers. We shall have occasion to return to the differential diagnosis of these latter diseases; as to the former, they can scarcely deceive us if we take into account the antecedents of the patient, the concomitant lesions, such as the primary ulcer or the cicatrix left by it, and the glandular adenopathies which are rarely wanting in such a case.

It seldom happens, moreover, that the febrile accessions which accompany syphilis are so violent or so regular as those of intermittent fever, or the temperature so high as in dothenteritis. In any case a careful observation of the course of the symptoms will soon remove all doubt.† There is not, in fact, any real difficulty,

* We cannot resist the temptation of pointing out the analogy which exists between the cephalalgia connected with certain serious changes in the kidneys and that of the commencement of syphilis. Two cases recently observed have convinced us of this resemblance, and of the difficulty of distinguishing the two conditions from each other, unless we had the antecedents and concomitant symptoms to guide us.

† We cannot be too careful in guarding against an error in diagnosis at the moment of the irruptive fever, the more so as the patients, especially women, more preoccupied by their general condition than by their local condition, say nothing of the latter. I have often seen syphilis overlooked at this period of its evolution, and have heard justly celebrated specialists maintain that there is no such thing as syphilitic fever, solely because they had never recognised the relation between that phenomenon and syphilis.

unless one of the preceding diseases comes in to complicate syphilis when it is approaching the secondary period; the only test then is the treatment. But it must be remarked, that mercury is here no longer the proper agent for the purpose. This fact, to which Diday has recently called attention, has also been verified by us. But are we, like Diday, to conclude from the fact that iron and iodine are the means to be employed for combating syphilitic fever, that this morbid condition has not the same relation to syphilis as the constitutional lesions, that it is occasioned, and not directly caused, by that disease? Not absolutely; for if it be permitted to attribute to the debilitation impressed upon the organism by the syphilitic poison some of the general disturbances in question, a great number remain which do not explain either the chlorosis or the anæmia.

What is the prognostic indication to be drawn from this group of symptoms which usually precede the eruptive period of syphilis? We are ignorant of it for the present, not having been able to follow our patients as long as we could have wished. It would be important, nevertheless, to know whether the intensity of the prodromata is in proportion to the severity of the disease. Far from being without importance, syphilitic fever, which Hunter compares to rheumatic fever, requires especial attention, and on this account we give several cases.

Indurated chancre, papular eruption, symptoms of gastric disturbance, fever, vertigo, dizziness, slight indistinctness of vision and hearing.

Obs. III.—V., a navigator, æt. 55, entered the Hôpital de la Pitié, October 9th, 1860. This man, whose general health was good, had contracted, some months before, an indurated chancre of the prepuce which, on admission, was still recognisable by the characteristic cicatrix left by it. Multiple glandular adenopathy in both groins, a papular syphilitic eruption on the trunk and limbs, cervical adenitis, alopecia, mucous patches on the right tonsil, slight redness and œdema of the isthmus of the throat—such were the various symptoms which he presented. Being of Flemish origin, this patient had difficulty in explaining what he felt. He complained, however, of pains in the muscular portion of the thoracic parietes, in the neighbourhood of the sternum, and in most of the joints. He had a foul, slightly furred tongue, disinclination for food, and almost total want of appetite. He also complained of vertigo, dizziness, cephalalgia, slight indistinctness of vision and hearing, his eyes were dim, and his aspect was expressive of dejection.

There was general prostration and fever (pulse 85). About three P.M. the fever increased, the skin was distinctly warmer, and the pulse more frequent. The cephalalgia, in particular, was more intense, and the patient

complained of feeling as if penknives were being stuck into the sides of his head. The organs were examined very carefully, and not one of them appeared to be affected. He was ordered emollient drinks.

The above-named symptoms continued, the patient lost flesh, and there was a febrile paroxysm each day about the same hour. Ordered protoiodide of mercury. Amelioration progressive, but slow.

The patient quitted the hospital on the 13th of November, in a decidedly improved condition.

In this case, the fever, which supervened at the same time as the eruption, persisted during its course, and was accompanied by nervous derangements (dizziness, vertigo, &c.), and by gastric disturbances, which might very well have led to the suspicion of a disease very different from syphilis.

Ulcers on the genitals, fever, roscola, mucous patches, and vegetations.

OBS. IV.—Eleonora L., æt. 18, sempstress, entered the Hôpital de la Charité (under M. Rayer) on the 22nd of September, 1858. Well formed and in good health, this young woman noticed, some weeks before, the existence of ulcers on the genitals; shortly afterwards there appeared in the same region vegetations which, on the admission of the patient into the hospital, formed upon each of the labia a protuberance of the size of a pigeon's-egg. Moreover, she had experienced on the two previous evenings a severe rigor, followed by heat and a slight perspiration, and complained of general uneasiness and lassitude. On the 23rd, we observed the above-mentioned symptoms (with the exception of the fever), alopecia, multiple, indolent adenopathy in both groins, cervical adenopathy. She had several baths, and was ordered Sédillot's pills (two or three daily). During the next few days she had several accessions of fever. On the 5th of October the vegetations were excised. On the 9th, uneasiness, lassitude, vague pains, frequent pulse, and the existence of a well-marked febrile condition, which made us suspect the imminence of an eruptive fever. Two days later, a well-marked rubeolous eruption, which left no doubt as to its specific origin, covered a great portion of the skin of the trunk. The treatment was continued, and the fever diminished somewhat.

On the 19th, about six in the evening, a severe rigor supervened, which lasted more than an hour. No sleep that night. The next day, fever, sore-throat, slight sub-maxillary swelling. On the 22nd, the patient was comfortable. On the 23rd, another rigor, about one P.M.; in the evening there was still fever, the patient complained of pains in the abdomen, appeared oppressed, had a white furred tongue, and perspiration towards morning.

When seen on the 24th, she had no fever, but pain and heaviness in the head, and slight somnolence. On the 25th, amelioration; on the 26th, the eruption having disappeared, the patient left the hospital, and thus escaped our further observation.

PERIOD OF GENERAL ERUPTION.

Syphilitic infection, lassitude, fever, pains in the joints.

Obs. V.—B., charwoman, æt. 30, admitted into the Lourcine Hospital, April 24th, 1860. This patient complained of inflammation in the anterior portion of the vagina; two months ago she had observed a sore upon the genitals.

At the time of her admission, she had multiple adenopathies, a general syphilitic eruption, a changed, dull, semi-typhoid expression; violent cephalalgia and want of sleep, fatigue, lassitude, loss of appetite, and a febrile condition more marked in the evening. Ordered proto-iodide of mercury and opium.

On the 30th, general condition the same; on the following day, amelioration. May 9th, cessation of the cephalalgia.

May 26th, pains in the right elbow and wrist, with slight swelling and redness. Ordered fomentations and blisters.

June 11th, this patient went out not entirely cured.—(Martel, unpublished obs.)

Indurated chancre of the right labium, fever, diarrhœa, epistaxis.—Inflammation of the right wrist.

Obs. VI.—E., sempstress, æt. 29, admitted into the Lourcine Hospital, April 24th, 1860. About a month after the appearance of an indurated chancre, this patient experienced a general sensation of fatigue and lassitude, her appetite declined, she had diarrhœa, pains in the head, with nocturnal exacerbations, and at the same time a febrile condition (pulse 84), with evening paroxysms.

Four days later, May 5th, epistaxis, which was repeated for several days; the skin became covered with a characteristic erythema.

July 21st, more severe pain about the right wrist, and slight swelling, accompanied by redness.

Appropriate treatment ended in subduing these various manifestations. The patient, however, did not leave the hospital before the month of October.—(Martel, unpublished obs.)

Indurated chancre, fever, gastric derangement, vertigo, dizziness.

Obs. VII.—G., glass merchant, æt. 51, a robust man, and generally enjoying good health. About two months ago he contracted a chancre, which was pronounced to be indurated.

On admission into La Pitié, May 22nd, 1861, he presented an extensive papular eruption and a febrile condition which had already continued for seven or eight days. Tongue furred, appetite null. Mucous patches numerous about the arms. Ordered Van Swieten's drops.

The fever ceased after a few days; the eruption was beginning to be modified, when the patient was suddenly seized with vertigo and general uneasiness, which caused some alarm of the possibility of a serious febrile affection.

Seven days later, this condition had ceased. He had continued to take Van Swieten's drops.

On the 2nd of July this patient left the hospital, the eruption having partly disappeared.

In the above cases, the fever precedes or accompanies the eruption; in the following one it is entirely independent of it.

Sores on the genitals, gastric derangement, uneasiness, lassitude, fever.—Chloro-anæmia, double anæmic bellows murmur, syphilitic eruption.

OBS. VIII.—L., female servant, æt. 20, admitted into La Pitié, August 10th, 1860, stated that she had perceived, about three months and a half before, the existence of sores on the genitals, and glandular swellings in the groins and axilla. Since that time she has never ceased to feel lassitude and fatigue, with vague erratic pains, but chiefly about the head and joints.

Her general health has been good, and all the members of her family are healthy.

For about a week previous to her admission, this patient was seized each evening, about seven o'clock, with a rigor, followed by heat and perspiration, and which disappeared almost entirely about ten P.M. She also had pain in the throat, and all the symptoms of an angina.

On the 8th of August there was erythematous redness of the pillars of the fauces and velum, with swelling of the glands. She had multiple inguinal adenopathies, absence of eruption, mucous patches beginning to heal, alopecia, general lassitude, continuation of the pains, double vascular bruit in the neck, and furred tongue. The organs within the chest healthy. The fever continues. Ordered an emetic.

On the 13th, symptoms less violent. On that day she began to take the proto-iodide of mercury. The fever soon ceased entirely, the uneasiness disappeared, and the digestive organs soon recovered their tone.

On the 24th of August, finding herself better in all respects, she asked for her dismissal, and left the hospital with a bellows murmur and general pallor.

§ 1. Cutaneous affections.—Family of Syphilides.—Division of this family into two great classes.—Superficial, generalised, or exanthematous syphilides.—Deep-seated, circumscribed, or gummy syphilides.

Alibert, Description des maladies de la peau observées à l'hôpital Saint-Louis, &c. Paris, 1806-1827. *Nosologie naturelle*. Paris, 1838. *Willan*, Description and treatment of cutaneous diseases; trad. allemande par G. Freese. Breslau, 1799-1816. *Bateman*, Practical synopsis of cutaneous diseases, &c. London, 1819. *P. Rayer*, Traité théorique et pratique des maladies de la peau. 1^{re} édition. Paris, 1827; 2^e édition, 1835. *L. V. Lagneau*, Traité pratique des maladies syphilitiques. 6^e édit., Paris, 1828. *Cazenave et Schedel*, Abrégé pratique des maladies de la peau 4^e édit., Paris, 1847. *C. H. Fuchs*, Die krankhaften Veränderungen der Haut und ihrer Anhänge in nosolog. und therap. Beziehung dargestellt.

Göttingen, 1840. *Schulz*, Diagnostik der Hautkrankheiten in tabell. Form., nach Hebra's Vorlesungen. Wien, 1845. *Simon*, Die Hautkrankheiten durch anatom. Untersuch. erläutert. Berlin, 1851. *Devergie*, Traité pratique des maladies de la peau. 2^e édit., Paris, 1857. *Gibert*, Traité pratique des maladies de la peau et de la syphilis, t. i. et ii. Paris, 1860. *Cazenave*, Annales des maladies de la peau et de la syphilis. Paris, 1844-1852. *Albers*, Ueber die Erkenntniss und Kur der syphilitischen Krankheiten. Bonn, 1832. *Humbert*, Manuel pratique des maladies de la peau appelées syphilides, d'après les leçons de M. Brett. Paris, 1833. *Philippe Boyer*, Traité pratique de la syphilis. Paris, 1836. *E. Lutz*, Ueber Hautsyphilis, inaug. Abhandl. München, 1836. *Martius*, Mémoire sur les causes générales des syphilides. Paris, 1838. *Baumès*, Précis historique et pratique des maladies vénériennes. 2 vols. in 8°. Paris, 1840. *Gibert*, Mémoire sur les syphilides (*Revue médicale*, Avril, 1814). *Legendre*, Nouvelles recherches sur les syphilides. Thèse de Paris, 1841. *Dieterich*, Die Krankheitsfamilie Syphilis. Landshut, 1842. *Cazenave*, Traité des syphilides. Paris, 1843. *Jolly*, Considérations sur la syphilis et les syphilides (*Revue médicale*, Paris, 1843). *J. Davasse et Deville*, Études cliniques sur les maladies vénériennes: des plaques muqueuses (*Archives de méd.*, Oct., 1845). *Bassereau*, Traité des affections de la peau symptomatiques de la syphilis. Paris, 1852. *Wilson*, On syphilis const. and hered., and on syphil. eruptions. London, 1853. *Thomas Hunt*, On syphilitic eruptions, ulcerations, and other symptoms. London, 1854. *Bazin*, Leçons théoriques et cliniques sur les syphilides. Paris, 1859. *H. Roth*, Ueber den Herpes der Syphilitischen. Würzburg. Zeitschrift, ii. 5 et 6, p. 376, 1861. *Hardy*, Leçons sur les maladies de la peau. Paris, 1860, par Moysant; 2^e édit., par Lefevre, Paris, 1863. *V. de Meric*, On syphilitic eruptions. *The Lancet*, ii. 122, Nov., 1862. *V. Veiel*, Mittheilungen über die Behandlung der chronischen Hautkrankheiten. Stuttgart, 1862, et Schmidt's Jahrbuch, t. 117, p. 296. *Zeissl*, Die Erkenntniss und Behandlung der Syphiliden. Wien med. Hall, v. 4-6, 1863. *Lehrbuch der constitutionellen Syphilis*. Erlangen, 1864. *Kleinhaus*, Ueber Herpes syphiliticus. Berl. Klinisch. Wochenschrift, i. 17, 18. *L. A. Dubuc*, Des syphilides malignes précoces. Thèse de Paris, 1864.

Described under the name of pustules by the writers of the last centuries, cutaneous affections of syphilitic origin were already known to Gaspard Torella (1498), who classed them as dry pustules and moist pustules:—"Species pudendagræ sunt plures, nam alia est sicca, alia est humida. . . . Sicca est triplex, humida etiam est triplex." A. Benivenius,* in 1507, admitted three varieties of these affections. Leonicens† also recognised several forms, which he dis-

* *De morbo gallico tractatus*, in *Aphrodisiacus*, 399.

† *Ibid.*, p. 38, *Liber de Epidemiâ*, &c. Venetiis, 1497.

tinguished, in accordance with the humoral theories of the times, as bilious, melancholic, &c. Haffenreffer* ranged the symptoms of syphilis under four heads. His division differs little, however, from that of Torella; it is this:—1. Affections of the hair and nails. 2. Spots and dry pimples. 3. Moist pimples, crusts, and ulcers. 4. More deep-seated affections. Plenck,† in 1783, formed a division which included seven species of syphilis. Cullerier and Bard,‡ 1820, divided venereal pustules into eleven classes: urticarious, miliary, itchy, lenticular, cherry-coloured, mucous, serous, squamous, crusty, ulcerating, and vegetative. Lagneau retained the word pustule to designate cutaneous syphilitic eruptions, of which he recognised twelve species. These eruptions have thus been the object of numerous divisions and subdivisions, in which were perhaps too often included affections not possessing any specific character.

At the beginning of this century, Alibert§ created the name *Syphilide*, for the purpose of including in a single group all the cutaneous manifestations of syphilis. He formed, in this way, a most natural family in a cutaneo-nosographical point of view, but not in a general description of syphilis. Under this denomination are comprised, in fact, affections differing as well in the lesion from which they result as in the period at which they appear in the course of the disease.

The classification of Alibert prevailed, however, although it bore marks of the confusion which reigned in the divisions of his predecessors. It was reserved for Bielt to introduce method and clearness into the group of cutaneous syphilitic affections. Applying to the classification of these affections the principles of nomenclature adopted by Willan, Bielt admits six orders of eruptions: exanthematous, vesicular, pustular, papular, squamous, and tubercular.

The numerous disciples of Bielt, in developing his fertile ideas, gave to the diagnosis of syphilides a precision truly remarkable. Thanks to the works of Cazenave, Rayer, Gibert, Legendre, Martius, Bassereau, Devergie, and Hardy, this group of eruptions is now well understood. True to the precepts of their master, these

* Πανδοχῆιον αἰολοδερμον, in quo cutis, &c. Tubingue, 1630, in 8°. Ulm, 1660, in 8°.

† *Doctrina de morbis cutaneis, quæ hi in suas classes, genera et species rediguntur.* Vienne, 1783, in 8°.

‡ *Dictionnaire des sciences médic.*, t. xlv. p. 271.

§ *Nosologie naturelle.* Paris, 1838.

authors have not introduced any essential change into the division of syphilides. Bassereau, however, has added to the six orders of Bielt two new divisions, which are—the moist papular syphilide, and the bullous syphilide. Hardy describes, in addition, a pigmentary syphilide.

Bielt's method has given us, in short, an exact knowledge of the elementary cutaneous lesions of syphilitic origin; one objection may be made to it, viz., that of having brought together manifestations which belong to different phases in the evolution of syphilis. Ricord was the first to insist upon the importance of taking into account this evolution in classifying syphilitic eruptions; and Bazin,* later on, without departing from Bielt's method, proposed a division based at once upon the course of the disease and upon the nature of the elementary lesion.

There exist for this physician two great classes of syphilides, the resolute and the ulcerative.

The resolute syphilides are exanthematous or circumscribed. The exanthematous resolute syphilides are—the erythematous, papular, pustular, vesicular. The circumscribed resolute syphilides are—the tubercular, pustulo-crustaceous, and papulo-vesicular.

As regards the ulcerative syphilides, they are divided into the puro-vesicular, tuberculo-ulcerative, and gummy.

This change introduced into Bielt's classification realises a true advance in the history of syphilides. It separates the various affections, not in reference to their origin, but in reference to their anatomical constitution and pathological signification. One objection may be made to it, viz., that the classification which results from it is a little complicated. We do not clearly understand, moreover, the utility of the principal division. The circumscribed syphilides, which form the second section of the class of resolute syphilides, have much less analogy with the exanthematous syphilides, near which they are placed, than with the ulcerative syphilides, since, like the latter, they possess the triple characteristic of appearing late, of showing themselves in small groups, and of forming deep sores. These characters justify us, we think, in classing amongst the affections of the last period of syphilis the very peculiar group of non-ulcerative circumscribed syphilides; for the skin, like the other organs, may be differently affected by syphilis, and the changes

* *Leçons sur les syphilides.* Paris, 1859.

which it presents, although identical, may terminate differently. Moreover, ulceration is not a fundamental characteristic, and no one, so far as I am aware, has ever thought of dividing into two classes sub-cutaneous gummy tumours, for the mere reason that some of them terminate in resolution, while others cause destruction and ulceration of the skin.

In consequence of these considerations, we think that the syphilitic affections of the skin, some early, superficial, and disseminated, others late, deep, and circumscribed, divide themselves naturally into two great classes :—

Early, or exanthematous syphilides (secondary affections).

Late, or circumscribed syphilides (tertiary affections).

We shall now proceed to study the affections which are included in the first group ; we shall afterwards point out those included in the second.

The *exanthematous syphilides* are characterised by being disseminated over the surface of the external tegumentary membrane, by appearing in successive bursts, by being polymorphous, by existing sometimes simultaneously, and by coexisting with multiple and indolent sub-cutaneous adenopathies. In addition to this, they secrete, for the most part, products inoculable upon persons unaffected with syphilis, they generally do not cause any itching, and are, some of them at least, of a red colour, resembling raw ham, or copper-coloured, the result of dilatation of the capillaries, and, in some cases, of a slight transudation of the colouring matter of the blood. They are, lastly, accompanied, or more frequently preceded, by alopecia and the general symptoms which usually mark the outbreak of so-called secondary syphilis.

These manifestations present several varieties, which we shall describe as follows :—

- A. Erythematous syphilide.
- B. Papular syphilide.
- C. Pustular syphilide.
- D. Vesicular syphilide.
- E. Squamous and pigmentary syphilides.

The changes of the hair and nails connected with one or other of these eruptions will necessarily be alluded to when describing them.

A. ERYTHEMATOUS SYPHILIDE.

Synonymy: Syphilitic Roseola (Bielt). Urticarious or formicular pustule (Trappe and Lagneau).

One of the most frequent and earliest manifestations by which syphilis makes known its existence, erythema, often appears even during the continuance of the primary lesion.

It is sometimes characterised by spots not raised above the surface, of a pale rose colour, which disappear on pressure; sometimes by patches of a bright or dark-red colour, slightly raised, and little or not at all modified by pressure. Hence two varieties, maculated erythema and papular erythema, the coexistence of which, it should be remembered, is far from being rare. Bazin admits, in addition to these, a granular roseola and a squamous roseola, characterised, the first by small papular projections, and the second by maculæ covered at first with scales.

Gaspard Torella* has left us one of the earliest observations on this affection. A man, who had undergone great fatigue in the month of August, 1497, was attacked by the new disease. Bloody and putrid ulcers, accompanied by red patches, appeared upon the genital organs; the red patches were afterwards spread over the whole body. "*Invenit totum infectum maculis latis, rubeis, sine pustulis.*" The ulcers had thick crusts upon them resembling the bark of a tree. These symptoms were followed by pains in the neck, head, and shoulders.

After Torella, we must pass on to Matthiolus to find a fresh allusion to syphilitic erythema. "*Sunt qui maculas tantum rubeas in luteum tendentes colorem monstraverint, &c.*"†

A. Ferrier‡ mentions this same symptom, which Fernel regards as one of the characteristic manifestations of syphilis. The skin, says this latter writer, becomes covered with numerous spots, sometimes red, sometimes fawn-coloured. "*Cutis universa crebris maculis minime tuberantibus aspergitur, iisque parvis, lentiginis instar, ac modo rubris, modo flavis.*"

* *Tractatus cum consiliis contra pudendam, 1497, in 4°, et Aphrodisiacus, p. 545.*

† *Traité du mal français, 1535, et Aphrodisiacus, p. 248.*

‡ *De pudendagrâ, cap. iii.; Aphrodisiacus, p. 907.*

Al. Petronius* tells us that in 1565 syphilis almost always manifested itself by red mukulæ, or by papules; syphilitic erythema was as common at that period, then, as it is at present. After this author we meet with few data relative to syphilitic erythema.

The syphilographers of the seventeenth and eighteenth centuries do not appear to have attached much importance to this symptom. Astruc and Hunter scarcely allude to it, and even during the first half of the nineteenth century the history of syphilitic erythema is still very imperfect. Trappe and Lagneau, and, later on, Cullerier and Alibert, describe, under the name of urticarious or formicular pustules, this eruption to which Bielt and his disciples, Cazenave and Schedel, give the name of *Syphilitic roseola*. Rayer recognises a maculated form of syphilis, of which he gives one case. Baumès, Gibert, and Ricord, admit syphilitic roseola, which Bassereau first, and afterwards Bazin and Hardy, have carefully described.

Syphilitic erythema appears to develop itself indifferently at all seasons of the year, in both sexes and at all ages. Like most of the syphilitic eruptions, it is comparatively more frequent in warm countries than in our climate; but we shall have occasion to return to this point.

This eruption generally commences upon the trunk, more rarely upon the face. Its development is sometimes slow and progressive, sometimes so rapid as to invade, in less than thirty hours, a great portion of the cutaneous surface, as happens when the eruption is provoked by an accidental cause, such as great emotion, a warm bath, excessive fatigue, or the abuse of spirituous liquors. The hypochondriac regions, the sides, the anterior and lateral parts of the chest, the shoulders, and the inner surfaces of the limbs are its usual seat; but it is also seen on the back, the face, and the palms of the hands. In Bazin's opinion, the early affection of the palms of the hands, generally known under the name of palmar syphilitic psoriasis, is only in reality a variety of syphilitic roseola. In the regions where this manifestation occurs, the skin begins to be marked with small rose-coloured spots, scarcely visible, but which, on coming into contact with the air, put on a mottled appearance, and may be mistaken for the vascular bluish marblings which cold produces on the surface of the skin. They gradually deepen in colour, and acquire

* *De morbo gallico, Aphrodisiacus*, p. 1167.

a greater extension. Varying in length from one millimeter to one centimeter, the erythematous spots present irregular slashed edges, and are seldom distributed with regularity. At other times they affect by their junction the circular or semicircular form common to a great number of syphilitic affections. These spots seldom cause itching; they vary with the age, sex, and constitution of the patient, and are generally more apparent in summer than in winter, in fair persons with a delicate skin than in those whose skins are darker. They are sometimes modified according to the region in which they are observed. Thus, while the dorsal surface of the hands and feet is the usual seat of the rose-coloured spots, the palmar and plantar regions are covered with papular spots of a dark red colour, painful on pressure, and upon which there form rapidly, rounded, squamous, epidermic patches, which constitute one of the forms of the horny syphilitic eruption of Bassereau and the squamous roseola of Bazin. The granular roseola of the latter author is characterised by the presence of small papular protuberances, each of which is traversed by a hair, and is probably formed by a hair follicle augmented in volume.

Course and termination.—Syphilitic erythema generally runs a slow course, even in the exceptional cases in which its sudden outbreak resembles that of an eruptive fever. It usually appears in successive bursts, whence the various hues of the skin, which puts on a peculiar appearance (*trout skin* of J. L. Petit). The duration of this symptom varies from a few weeks to several months. It terminates by resolution or desquamation, leaving behind it brownish or yellowish spots, more characteristic, according to Gibert, than the eruption itself.

Syphilitic erythema is liable to relapses (eighteen times out of 192, Bassereau), the most frequent occasional causes of which are excessive fatigue and the abuse of spirituous liquors. The fresh eruption is not usually, like the first, preceded by general symptoms, but does not differ from it sensibly in other respects.

Diagnosis.—It is not always easy to recognise syphilitic erythema. At its first outbreak this symptom may easily escape notice, unless the integument be examined carefully and in an oblique direction. The peculiar distribution of the spots, generally more confluent on the anterior surface of the body, the slow evolution of the eruption, and its colour, are the principal diagnostic signs. These signs do not, indeed, possess anything positive, but the concomitant morbid

manifestations, such as chancres, adenopathies, mucous patches, alopecia, &c., leave no doubt as to the origin of the erythema.

Measles and scarlatina, diseases the eruptions of which sometimes resemble syphilitic erythema, are recognised by the intensity of the fever which accompanies them, by their acute course, and by the localisation they present from the first—measles in the oculo-nasal mucous membrane, scarlatina in the pharyngeal mucous membrane.

Ordinary measles and the various non-syphilitic erythemas will not be confounded with the roseola of which we are now treating, if we take into account the antecedents of the patient and the presence of glandular adenopathies. Moreover, those erythemas are connected with causes often easy to recognise. Rheumatismal erythema, for example, shows itself during the course or at the termination of an attack of articular rheumatism; it commences upon the limbs, and especially in the vicinity of the joints. The eruption produced in certain cases by the use of copaiba has deceived some observers; but in addition to the circumstance that it is not accompanied by any of the affections which so frequently coexist with the erythematous syphilitic eruption, roseola caused by copaiba, which generally supervenes during the course of a gonorrhœa, usually commences in the neighbourhood of the wrists and hams, and is sometimes even confined entirely to those regions.

Mercurial erythema is distinguished from the syphilitic affection by its form, its course, and its rapid disappearance after the cessation of the action of the mercury on the economy.

Prognosis.—Regarded as a cutaneous eruption, syphilitic erythema is a benignant affection, and scarcely ever causes destruction of the skin. Regarded as a symptom of constitutional syphilis, it indicates the existence of a serious disease, which is still only in its early stage. In this point of view, at least, the prognosis of roseola is less unfavourable than that of most of the syphilitic eruptions. This opinion, now adopted by many observers, had already been expressed by Fernel, who clearly pointed out the absence of serious relapses following erythematous syphilides (*"quam nulla alia sequuntur graviora symptomata"*).

B. PAPULAR SYPHILIDE.

Synonymy: Disseminated tubercular syphilide (Bielt); cherry-coloured syphilide (Alibert); papulo-tubercular syphilide (Bazin).

Like syphilitic erythema, the papular syphilide, known to some of

the syphilographers of the sixteenth century (Jean Benedetti and Nicolas Massa), was almost ignored by the physicians of the seventeenth and eighteenth centuries. Cullerier the elder and his pupils, however, gave a pretty complete description of it under the denominations, *miliary*, *lenticular*, *cherry-coloured pustules*. Later on, Alibert admitted a lenticular and a pustular syphilide, but Carmichael was the first to recognise as a distinct species the papular syphilide, which has since been studied by Bielt, Rayer, Cazenave, Gibert, Ricord, Ch. Martius, Legendre, Bassereau, Hardy, &c.

Under this denomination we include, following Bazin's example, the papular syphilide of authors and the disseminated tubercular syphilide, a precocious eruption, and differing greatly therein from the circumscribed tubercular syphilide, which is always tardy.

The papular syphilide is characterised by protuberances of greater or less size, rounded, generally disseminated, solid, dry, always terminating in resolution, and leaving upon the skin small, brownish, non-persistent depressions. It affects by preference the trunk, and especially the abdomen, the sides, and the back; it is also seen upon the limbs, the forehead, and the hairy scalp. It may invade simultaneously all parts of the body, but most frequently proceeds by successive bursts, after having commenced at a fixed point. The papular protuberance from which it has obtained its name, although very variable in size, does not usually exceed that of a small lentil. Its colour, to which it has been sought to attach an exaggerated diagnostic value, is far from being constant, varying with the period of the eruption. When they first appear, the papules present a pink or red colour, susceptible of removal by pressure, and somewhat resembling that of the rose-spots of typhoid fever. Later on, during their development, they put on a coppery red tint, which does not entirely disappear on pressure, and which is very justly regarded as highly characteristic; this tint is always more strongly marked on the lower extremities.

But little is known of the exact seat of this elementary lesion. Some authors* think that the sebaceous or hair follicles are its principal seat. The fact appears to them little doubtful, at least as concerns the miliary papular syphilide. We are not inclined to speak so positively; we believe, in fact, that the papillæ of the dermis, like the hair-bulbs, are also sometimes the starting-point of this affection.

* See Hermann Zeissl, *Lehrbuch der constitutionellen Syphilis*, p. 115. Erlangen, 1864.

After a longer or shorter duration, the syphilitic papules decline, and become covered with a scab, which soon breaks, and leaves around the point of prominence a whitish ring, to which Bielt justly attached great importance; it is, in fact, one of the favourable symptoms of this form of exanthematous cutaneous syphilis. Violet-coloured or yellowish spots, always superficial, but not indelible, succeed the eruption in question.

Papular syphilides present several varieties; according to Bassereau they include three species—lenticular papules, conical papules, miliary papules. Hardy recognised only two varieties—lenticular papules and flat papules. We shall admit, with Bazin, a *lenticular papular syphilide* and a *miliary papular syphilide*. The conical or hemispherical papules, in the first of these varieties, are remarkable for their size, which may equal that of a lentil or a cherry; while in the second, which is also called syphilitic lichen, it does not exceed that of a millet-seed. Besides these varieties, the papulo-tubercular syphilide presents differences according to the regions in which it is observed. On the hairy scalp, this eruption is rarely well marked, and almost always covered with scaly crusts, resembling those which usually coexist with syphilitic erythema. On the face, this same form is also observed, and when it occurs on the forehead it produces one of the forms of the Corona Veneris. The characteristic of the papules in the palmar and plantar regions is, to be covered with scales which, according to Bazin, resemble those of psoriasis.

In some cases the papules are surmounted by a small blister, full of a whitish fluid, which soon dries up and falls off, exposing a smooth, shining protuberance of a coppery red colour.

The course of the papular syphilide is essentially chronic. Left to itself, this manifestation has a duration which may vary from one to several months, not so much on account of the slowness of the evolution of the elementary lesion, as of the successive development of fresh papules, although these latter generally disappear more quickly than the earlier ones.

Resolution may be said to be their almost constant mode of termination, the tendency to ulceration being, so to speak, null. Like erythema, but less frequently, papular syphilis is subject to relapses. Bassereau states that he observed two such cases. It does not always immediately follow the chancre, but is sometimes observed to succeed an erythematous syphilide.

The syphilitic affections which most frequently accompany the

papulo-tubercular syphilide are erythema, mucous patches, chancre, and superficial ecthyma.

Diagnosis and prognosis.—The distribution of the papules and their coppery colour, and the peculiar desquamation which occurs at their circumference after a certain time, are objective signs which make it easy to distinguish the papular syphilide from affections having any other origin, even in the absence of concomitant symptoms of syphilis.

The eruption of typhoid fever will, in any case, be distinguishable by its slight extension, the small volume of the spots, and the existence of acute fever. Miliary fever is accompanied by profuse sweating and gastric derangements not usually observed in papular syphilide. Amongst the common eruptions, certain varieties of lichen might lead to the belief in the existence of a papular syphilide, if the itching which accompanies them and the absence of any symptom of syphilis did not show sufficiently that they did not depend upon a specific cause.

The indurated protuberances of common acne, equally liable to be mistaken for syphilitic papules, are recognised by their favourite seat, which is the face and dorsal region, and afterwards by the wrinkled cicatrices which they produce.

We have just seen that syphilitic papules do not alter the texture of the skin; in this respect, therefore, their prognosis is favourable. Considered in the series of the manifestations of syphilis, these eruptions also do not constitute an unfavourable symptom, in reference at least to the later forms of cutaneous syphilis.

C. PUSTULAR SYPHILIDE.

Synonymy: Syphilitic pustules (*pustulæ crustosæ, ambulativæ, &c.*).

Under this name is understood a disseminated eruption, characterised by a collection of pus, and leaving only a slight cicatrix behind it.

The eruption, in respect to frequency, comes immediately after the erythematous and papular syphilides. One of the most frequent syphilitic manifestations at the end of the fifteenth and beginning of the sixteenth century, it raged at that time with great intensity; it is also described, in the darkest colours, as ulcerating the flesh and eating down even to the bones. In the present day it has lost much of its severity.

The pustular syphilide may extend to the whole surface of the skin, but usually commences on the hairy scalp or face, whence it spreads to the trunk and limbs. The most superficial portion of the skin about the hairs appears to be its anatomical seat. It presents itself under various aspects, but whatever may be the form which it assumes, there is little variety in the mode of its evolution. First of all it appears in the form of a yellow, red, or coppery stain, then comes a pimple of small volume, which suppurates and becomes covered with a crust; this crust falls off, and a slight ulceration remains to mark the spot.

It includes several varieties. Many authors admit two only, the ecthymatous and the acneiform syphilide. In accordance with Bassereau and Bazin, we shall describe the three following modifications :—

1. The *lenticulo-pustular syphilide* of Bazin, the *acneiform* of Bassereau, characterised by pustules, the size of a small lentil, composed of a red base, surmounted by a vesicle filled with dirty serum or pus. Discrete and arranged in groups, these pustules, by their indurated base and purulent summit, resemble the eruption of varioloid. They develop themselves first upon the face or neck, after which they extend in successive bursts to most of the regions of the body, without ever having, like the pustules of common acne, their seat almost exclusively upon the upper part of the trunk.

After having persisted for a longer or shorter time, the contents of the pustule solidify into grey or yellowish crusts. These become detached and leave either a papule, or a dark-red or copper-coloured spot, or else a superficial ulcer, followed by a white, rounded, slightly depressed cicatrix, different to the elongated and wrinkled cicatrix proper to common acne.

2. The *miliary pustular syphilide* of Bazin, the *impetiginoid* of Bassereau, commences in the same regions as the foregoing; it consists of small vesicles traversed at their centres by a hair, and surrounded by a bright red circle. The pus in them sometimes dries up and forms a yellowish or greyish crust, analogous to that of impetigo. The cicatrix which follows is remarkable, after a time, for its discoloured centre, surrounded by a copper-coloured border, which gradually disappears.

3. The *phlyzaceous pustular syphilide* (superficial disseminated syphilitic ecthyma) has larger pustules, disseminated, sometimes depressed at their centre, and always surrounded by a red circle.

These pustules contain a fluid which, on drying up, often after having remained stationary for several weeks, forms brown or blackish crusts. These leave exposed a livid spot, the disappearance of which takes place slowly, and afterwards a white cicatrix, but different to the honeycomb cicatrix of small-pox.

The course of the pustular syphilide is sub-acute or chronic; its duration, which is variable, generally extends to several months, thanks especially to its appearance in successive bursts.

Diagnosis and prognosis.—When it is preceded by general symptoms, the phlyzaceous pustular syphilide might at first be mistaken for an attack of varioloid or of small-pox; but the difference in the course and intensity of the general symptoms, the antecedents, and the concomitant syphilitic lesions cannot long leave any ground for doubt.

Amongst the non-febrile eruptions, common acne may easily be confounded with the lenticulo-pustular syphilide; but it is distinguished by larger pustules, and a deeper red colour. The pustules of acne appear upon the face and back, and never upon the legs, and are followed, moreover, by white, elongated, and deeper cicatrices.

The eruptions symptomatic of itch cause intense itching, and are characterised by the peculiar furrows ending in vesicles, the usual seat of which are the abdomen, the buttocks, and the penis. By all these means it is easy to distinguish them from each other.

The prognosis of the pustular syphilide is generally less favourable than that of the preceding forms, on account of the numerous relapses (fifteen times in seventy-two cases, according to Bassereau) to which it is liable. The purulent exudation is, moreover, believed by several syphilographers to be the indication of a severer form of syphilis. But it is well to remember that authors usually include in the group of pustular syphilides deep-seated ecthyma and rupia, and thus it is seen why a certain tendency exists to regard the prognosis as more unfavourable than it really is.

D. VESICULAR SYPHILIDE.

Synonymy: Vesicular, serous syphilitic pustules (*herpes syphiliticus*, &c.).

This manifestation is characterised, as its name indicates, by the presence of small serous vesicles distributed more or less regularly on the surface of the skin. Admitted by Trappe and the elder

Cullerier, under the name of serous pustule, and by Alibert under the denomination of miliary and scabious pustular syphilitic eruption, the vesicular syphilide has been most carefully studied since the appearance of the important labours of Cazenave, Schedel, and Bassereau, who have given detailed observations concerning it.

One of the rarest forms of cutaneous syphilis, it is also that concerning which authors differ most. Bassereau, who has seen only twelve cases, admits the following four varieties:—

The vesicular syphilide *resembling chicken-pox*, in which the disseminated vesicles, which are sometimes pointed, sometimes globular, and sometimes depressed at the centre, are filled with a serous fluid, which soon becomes opaque, and often ends by being converted into a purulent fluid; hence a greater resemblance to varioloid than to chicken-pox. Moreover, each vesicle is surrounded by a copper-coloured ring.

The vesicular syphilide *resembling eczema*, the vesicles of which, sometimes transparent, arranged in groups, or disseminated, distinctly occupy the hairy follicles of the skin; sometimes opaque and agglomerated, become covered with flavescent crusts (*eczema impetiginoides*).

The vesicular syphilide *resembling herpes*, presents vesicles arranged in irregular groups, having the appearance of herpes phlyctenoides, or in rounded or oval groups affecting the circinated form.

The fourth variety is distinguished by the hard and copper-coloured base upon which the vesicles stand.

Hardy recognises the three first varieties. Follin states that he observed one very distinct case of syphilitic herpes. Bazin admits only the varicelliform syphilitic eruption. The latter commences by a spot of a bright red colour, upon which a small rounded vesicle develops itself, the serum in which becomes purulent at the end of eight or ten days, and forms crusts. According to the same author, the other varieties admitted are nothing but arthritico-parasitic or herpetic manifestations. This dermatographer further describes a circumscribed papulo-vesicular syphilide, which is the affection known to Rayer, under the name of syphilitic eczema, and with this species he connects a variety pointed out by Erasmus Wilson, under the name of *corymb-shaped syphilide*. This variety, which we have ourselves had only one opportunity of observing, generally appears late, and in this respect belongs rather to the tertiary period. It is

characterised by large lichenoid, confluent patches, formed by thickly-studded granulations, or rather by small red papules, some full, solid, exfoliated, others vesicular at their summit. These patches form a first zone which is surrounded by a second, the papulo-vesicular elements of which are less closely placed, so that the whole eruption offers something special, and resembles, in reality, the arrangement in *corymbi*.

The course of the vesicular syphilide is chronic, despite the reactionary phenomena sometimes observed at the outset, as at the outset of all the exanthematous syphilides. The duration of the vesicular stage is generally short; but the squamous stage which succeeds it usually lasts much longer—a month at least. The syphilitic vesicles terminate in resolution, after having sometimes slightly ulcerated the tissues, in which case they leave small cicatrices which gradually disappear.

Diagnosis and prognosis.—The difficulty of the diagnosis here is in proportion to the rarity of the affection.

Common chicken-pox and small-pox are the two diseases which the vesicular syphilide may simulate at the commencement; but the slowness of its course and the concomitant syphilitic phenomena, do not long leave room for doubt.

Itching is an excellent distinctive symptom of herpes and eczema not resulting from syphilis.

The prognosis of the vesicular syphilide differs little from that of the papular or pustular forms. Bassereau has never seen this eruption recur or succeed another form. In the twelve cases which he observed, it was always the first symptom consecutive to the primary lesion (chancreous erosion), and always showed itself in from one to six months after the contagion.

E. SQUAMOUS AND PIGMENTARY SYPHILIDES.

Syphilographers are still divided in their opinions about the two elementary forms now in question: while some admit them most distinctly others reject them absolutely. If we look for the reason of this difference of opinion, we see that it depends partly upon the circumstance that these manifestations, and especially the squamous affection, are rarely primary, and only form in general one of the phases of another lesion. We do not, however, feel called upon, like some authors, to deny utterly the existence of these morbid deter-

minations, since we have under our observation at the present moment an undoubted case of syphilitic psoriasis.* But we readily acknowledge that these affections are much less frequent than those previously described.

* The existence of a squamous syphilide is contested by some French physicians, but it appears to us that the following facts do not leave any doubt as to the reality of this manifestation. These facts are:—1. M., a cook, æt. 27, had a primary sore in May, 1864, soon followed by lassitude, fever, angina, bronchitis, and a doubtful eruption. In March, 1865, she had cephalalgia, intermittent febrile accessions, giddiness, loss of appetite. She went into the Hôtel-Dieu, April 11th, with an eruption upon the fore-arms, elbows, thighs, front part of the chest, and back. At these different points there existed disseminated spots, scarcely prominent, about one centimeter in diameter. These spots, of a dark, reddish brown colour, were covered with whitish pellicles, which gave them a great analogy to psoriasis guttata. This analogy was especially striking on the fore-arms, where brilliant, glittering, white scales were seen. There were also large papules in the palm of the left hand, cervical and inguinal adenopathies, redness of the mucous membrane of the palate and pharynx, and ulceration of the left tonsil. She was ordered *one of Dupuytren's pills* (corrosive sublimate, opium, guaiacum) daily. April 20, the fever had ceased, but cephalalgia with loss of sleep continued. The eruption is fawn-coloured, the ulcer on the tonsil is almost cicatrised.

In May, no appreciable amelioration as regards the eruption having manifested itself, Dupuytren's pills were replaced by pills of proto-iodide of mercury, and afterwards iodide of potassium and sulphur baths were employed. Nevertheless the eruption spread and became more confluent, while the ulcers in the throat became completely cicatrised. The eruption varied little in character, and from time to time a fresh crop appeared. June 15th, there still existed upon the hands, fore-arms, back, chest, and belly, spots of the size of a sixpenny-piece, covered for the most part with white non-imbricated scales. There was an analogous eruption at the roots of the hair, and upon the hairy scalp, with falling off of the hair. *Ordered baths with corrosive sublimate.* July 1st, there was marked improvement, the scales had fallen off and the spots were disappearing. July 15th, there was pain in the tongue, and there were seen in the median line two or three tumours, of the size of a small nut, which were prominent and resistant. *Ordered one of Dupuytren's pills and potass. iodid. gr. xxx. daily.* On the 15th of August, these tumours had diminished in volume. On the 18th, the buccal mucous membrane still presented a few mucous patches, which had disappeared on the 25th. From August 20th, the general health of the patient improved, she gained flesh, and only a slight degree of insomnia remained. The eruption became fainter every day, and early in September, all the symptoms having ceased, the patient left the hospital.

a. Squamous syphilide.—This affection presents several varieties. Hardy, who does not hesitate to admit this form, describes the three following varieties:—

The *squamous syphilide in drops*, described also by some authors under the name of *Syphilitic psoriasis*, is characterised by rounded spots, slightly prominent, from three millimeters to one centimeter in size. These spots, or rather these papules, of a coppery brown colour, are covered with fine, white scales, not imbricated, which on falling off at the end of a few weeks, leave a spot not followed by a

2. A young woman, æt. 25, of lymphatic temperament, had, when six years old, an affection of the lymphatic glands of the neck, terminating in suppuration. At the age of 24 (1865), she was delivered of a healthy child. In January, 1866, she had on the trunk of the body an eruption of spots, accompanied by slight itching. In April she entered the Hôtel-Dieu, having her back, chest, and belly studded with spots a centimeter or more in diameter, some slightly oozing, others covered with dry and brilliant scales. At the same time there were tubercular pimples upon the lips, angina, and mucous patches upon the right tonsil and corresponding pillar of the velum palati. Ordered a pill of proto-iodide of mercury, sulphur baths, a gargle with tincture of iodine, and iodide of potassium. May 15th, the angina had extended and occupied the whole of the velum palati, the posterior wall of which was greyish, injected, and granular. On the top of the head a rounded tubercle secreted a whitish matter analogous to that of the mucous patches. No appreciable amelioration. The proto-iodide was replaced by iodurated biniodide. June 18th, prominent greyish patches upon the velum palati and whole of the back of the mouth. The eruption has become somewhat modified. The throat was cauterised with nitrate of silver. July 15th, the eruption was partly effaced, and the throat was better. The patient left the Hôtel-Dieu, but shortly afterwards we heard that she had gone into the Hospital St. Louis with fresh symptoms.

The striking feature in these two cases is, if we take into consideration the peculiar form of the cutaneous eruption, the tenacity of the affection, which for a certain time at least resisted the employment of the ordinary therapeutic agents. The tenacity was such, that if it were allowable to form an opinion upon so small a number of facts, I should say that squamous syphilis is the ordinary indication of a severe form of that disease. The seat of this eruption and its peculiar characters distinguish it from the psoriacal eruptions connected with either a herpetic condition or with arthritis. In these latter diseases, in fact, the scales are always drier, whiter, and more abundant, the eruption usually appears in the neighbourhood of the joints, chiefly on their convex surface, and is accompanied by itching, so that they are manifestly distinct from the syphilitic eruption.

oicatrix. The trunk and upper extremities are the most frequent seat of this eruption, which appears from six months to two years after the primary lesion, and is distinguished from herpetic psoriasis by difference of seat. In fact, while the former of these affections is distributed to almost all parts of the body, the latter is observed chiefly on the elbows and knees; the scales, moreover, which are not imbricated in syphilitic psoriasis, are so, on the contrary, in common psoriasis.

The *circinated squamous syphilide* is remarkable for its circular distribution. It is most frequently situated on the face, and is really, we think, only a variety of the tubercular syphilide, of which we shall shortly have to speak. A presumption in favour of this view is that, like the latter, it does not show itself until one or several years after the appearance of the primary lesion.

It presents itself in the form of reddish brown spots, little prominent, forming circles or segments of circles, the centres of which are generally healthy. Upon these spots, of the size of a one- or two-franc piece, are seen fine, white, non-imbricated scales. The absence of itching, and the slight extension of this affection, distinguish it from herpes circinatus.

The *palmar and plantar syphilide* (*Psoriasis palmaire*) occupies, as its name indicates, the palms of the hands and soles of the feet. It is characterised by slightly prominent, rounded spots, of a coppery colour, covered with hard, greyish, confluent scales, which in some cases take the form of cracked patches, and give rise to chaps and fissures, which are often painful. At the edges of the scales or patches, there is seen a characteristic brown border, in the form of segments of a circle. Simple or herpetic psoriasis, which has the same seat, is distinguished by its brighter red colour and more intense itching. It generally exists at the same time on the elbows and knees.

2. *Maculated or maculated syphilide*.—The *maculated syphilide*, as M. M. Moreau * and afterwards Hardy † were the first to call attention, has been carefully described by Pilon ‡ under the name of *psoriasis syphilitica*. It is characterised by rounded, non-prominent spots of the size of a half-franc piece, of a greyish or coffee

* *Revue médicale de la France* 1877, p. 352.

† *Revue médicale de la France* 1884.

‡ *Revue médicale de la France* 1887.

with milk colour. These spots have irregular or jagged edges; sometimes isolated, they are most frequently grouped together in large numbers in the same region. They are observed chiefly on the neck, but are met with also on the face, the upper lip, the forehead, the abdomen (Hardy), and the legs (Pillon). They sometimes coalesce by their edges, at other times they leave intervals of white skin, causing marblings by the diminution in the depth of the pigment. They are not accompanied by either heat or itching, and are not followed by desquamation. The period of their appearance in the syphilitic series usually follows the decline of roseola.*

Among the affections which may simulate this form of eruption is pityriasis versicolor, a squamous and not maculated affection, presenting, moreover, a yellower tint, and ephelides, the large and accentuated patches of which rarely exist upon the neck.

ALOPECIA.

Bern. Tomitanus, De morbo gallico, lib. ii. De mutationibus gallici morbi, cxvii. Aphrodisiacus Luisini, p. 1101. *A. Traj. Petronè*, De pilorum defluvio et unguium dentiumque casu, *ibid.*, p. 1332. *Rayer*, Traité de maladies de la peau. 2^e édit., Paris, 1835, t. ii. p. 424. *Sigmund*, Bemerkungen über Krankheitserscheinungen an den Hären bey Syphilis, Oesterr. Zeitschr. für prakt. Heilk., No. 37, 1859. *A. Cazenave*, Traité pratique des maladies du cuir chevelu. Paris, 1850. *Diday*, Histoire naturelle de la syphilis. Paris, 1864.

Alopecia, which is the partial or total falling off of the hair upon the head or other parts of the body, is to be regarded as one of the important manifestations of syphilitic infection. It supervenes at the same time as the premonitory symptoms, or, at least, the outbreak of the early forms of cutaneous syphilis. It also shows itself later, however; but in these cases it is most frequently the consequence either of a lesion of the hairy scalp, and therefore of the hair bulbs, or of a change in the bones of the cranium (exostosis or periostitis). Sometimes, also, alopecia, the result, to a certain extent, of general debility of the organism, is, like the falling off of the cuticle, a symptom of cachexia. Hence several varieties of alopecia which it is possible to group under two heads, and which, by opposition, may be called, the one *primary*, the other *consecutive*. The

* V. Tanturri, De la syphilide pigmentaire à fond jaune (*Il Morgagni*, 1863, Napoli).

former only of these two varieties forms part of the period of general eruption, and demands our attention at present.

Alopecia, if we are to believe several imposing authorities of the sixteenth century, did not show itself at the very commencement of the great epidemic, but only some years later. "During the last six years," says Fracastor,* "the disease (syphilis) has again changed considerably. Pustules are now seen in very few patients only, and scarcely any or only very slight pains, but many gummy tumours. A circumstance which has astonished everybody is the *falling off of the hair of the head and other parts of the body*; this gives a ridiculous appearance; some have no beard, others no eyebrows; some are bald. At first, this symptom was attributed to the remedies, especially to mercury, but when better understood it was recognised as depending upon a change in the disease." Brassavole † assures us that for twenty years (*i.e.*, since 1533) venereal symptoms have been observed which render it doubtful whether the disease is declining or whether it has changed in character. The first of these symptoms is the *falling off of the hair*, which gives the patient a ridiculous appearance; for one cannot help laughing on seeing men without beards, or eyebrows, or eyelashes. Fallopius ‡ is not less explicit on this point, for he says (1560 or 1561):—"During the first forty years (*i.e.*, before 1534) there was no *falling off of the hair*; but it commenced about thirty years ago."

It is evidently little probable that syphilitic alopecia should have manifested itself so late, and it appears much more reasonable to suppose that it passed unobserved until that period. But, however this may be, it was from that moment that falling off of the hair began to be considered as a symptom of syphilis. Amb. Paré, Rondelet, § N. Massa, and several other authors make mention of it. Fernel not only mentions it distinctly, but also points out the usual period of its appearance. He asserts that in the first stage of syphilis the virus insinuates itself under the skin in the form of a vapour, whence the falling off of the hair; thus he makes alopecia one of the first manifestations of the consecutive infection.

* *De morbis contagiosis*, lib. iii. cap. ii. Venice, 1546.

† *De morbo gallico*. Venice, 1553.

‡ *De morbo gall.*, cap. xxiii. 156. Compare Hercules of Saxony, *Luis venereæ perfectissimus Tractatus*. Patavii, 1597.

§ *Aphrodisiacus*, 938.

This symptom, often connected with premonitory cephalalgia, is so frequent that Diday observed it fifty-three times amongst sixty patients. Its seat is the hairy scalp, more rarely the eyebrows, the beard, and the hair of the body. But women, according to the same author, are more subject than men to the falling off of the hair of the face. One of the first modifications of the hairs is an unusual dryness. In the case of the hairs of the head they are seen to lose their brilliancy and elasticity; they become brittle, woolly, and sometimes their colour even changes in consequence of a diminution in the formation of the pigment.

Sigmund goes so far as to assert that the black hair of an adult may turn grey under these circumstances. But, however this may be, the hairs generally come out when pulled ever so gently. For the most part the falling off is only partial, occurring in patches of greater or less extent; more rarely it occurs in masses, and it is confined to certain regions, especially the temporal. This symptom does not often invade the whole cutaneous surface, but a patient observed by Vidal de Cassis* presented, during convalescence from general syphilitic eczema, the falling off of all the hair of the head, face, and upper part of the body. This patient recovered.

The evolution of alopecia is slow and extends generally from one to several months; but whether it be partial or general, if it occur early in the diathesis, complete recovery is the rule; the hairs grow again; finer at first than before, they speedily recover their former strength and consistence.

This condition is not a symptom of secondary syphilis only, it is also observed in a great number of diseases which deeply affect the constitution. It is seen to supervene after typhoid fever, the puerperal condition, &c. However, it is possible to recognise these various sources, if we are able to ascertain the morbid antecedents of the patient. There are cases, moreover, in which the seat of the affection alone suffices to clear up the diagnosis. Thus the baldness which occupies exclusively the upper and middle portion of the cranium is not generally of specific origin. It is important to know this, for every available circumstance ought to be called in for the diagnosis as well as the prognosis of syphilis, and, as regards the latter, alopecia, when it is of considerable extent and has continued long, a year, for instance, may be regarded as an unfavourable sym-

* *Traité des maladies vénériennes*, 1855, p. 420.

ptom. Rarely, in fact, does the syphilis which it accompanies become cured spontaneously.*

Authors are not all agreed as to the pathogenic condition of syphilitic alopecia. This symptom, which, according to some, is the consequence of an eruption on the hairy scalp, is regarded by others as the effect of an anemia produced by the syphilitic infection. Mercury also has been suspected, but wrongly. Bassereau, who shares the first view, asserts that the hair falls more abundantly when a great number of pustules form upon the hairy scalp. But it cannot be maintained, however, that the falling off of the hair is caused solely and necessarily by this eruption. What is certain is, that it is observed at points where it is often impossible to discover any trace of a cutaneous lesion. It is none the less to be borne in mind that it is the result of a lesion of the hair follicles, sometimes direct and primary, sometimes indirect or consecutive.

LESIONS OF THE EPIDERMIS AND NAILS.

A. *Lesions of the epidermis.*—The changes in the epidermis connected with the various eruptions described above are comprised by Vidal de Cassis under the denomination of falling off of the epidermis. "We see," says that author, "and that as the only consecutive symptom in some cases, the epidermis become slightly thickened, discoloured, more greyish or whitish, then detached in small plates, which leave beneath them the papillary layer covered only very thinly with fresh epidermis. These phenomena present themselves especially in the palms of the hands. When these plates are numerous, touching and running into each other, the falling off of the epidermis may occur over a considerable surface; the fingers are sometimes thus denuded. Some authors applied the term *Pelade* to this falling off of the epidermis of the hands, the feet, and other points of the body. The epidermis sometimes falls off by an extremely fine, branny desquamation, and that upon the hairy scalp, when there is alopecia, sometimes even without the falling off of the hair. These affections are also met with upon the epidermis of the face, in the beard, and on the eyebrows. This falling off of the epidermis is often a consequence of an erythematous, impetiginous, or papular affection. This is the *pityriasis* of authors."

* Diday, *Histoire naturelle de la syphilis*, p. 107.

B. Disease of the nails (onyxis).—The change in the nails is most commonly the consequence of a modification in the matrix, which is the secreting organ of the horny substance. According to Brassa-vole, the falling off of the nails, like that of the hair, was not observed during the first period of the appearance of the *French disease*, but only forty years later, about 1533. However this may be, we must look to recent times for a description at all complete of this manifestation of syphilis. A mere appendage of the skin, it will easily be understood that the matrix of the nail may present most of the eruptive forms described above. But in addition to these, the sub-ungual groove is often invaded by mucous patches, lesions which we shall examine shortly, and then there oozes from it a whitish or brownish matter, of a character quite peculiar. Two observations by Lélut, quoted by Rayer,* appear to allude to a lesion of this nature.

Psoriasis of the matrix of the nail differs from psoriasis of the palms of the hands only by the modification of the unguinal horny lamina. The following case, which occurred in a student of our acquaintance, is an instance of this affection:—

ONS. IX.—X., a young Wallachian, aged 23, observed, in April, 1859, an indurated chancre upon his penis, for which he consulted M. Ricord. During a period of four months' duration, he took 180 pills of proto-iodide of mercury, which did not prevent the appearance, in August, of a fresh ulcer, concerning the characters of which he is far from explicit. In September, he took iodide of potassium for three weeks. In the course of the month of January, there appeared in the palms of the hands a papular eruption, to which the name of psoriasis palmaris was given. This affection disappeared rapidly after a few days' treatment, but was followed by obstinate sore-throat. The bichloride of mercury, administered at first, was abandoned in March, and from that time the iodide of potassium was given again, and the use of it continued into June. In the course of the month of April, this patient, who had previously had attacks of intermittent fever, was again the subject of that disease, upon which, this time, sulphate of quinine had little effect. During the month of June, fresh mucous patches appeared on the tonsils, which were much swelled, and upon the velum palati; the psoriasis palmaris showed itself afresh. It was at this period that I was consulted. In the unguinal groove of most of the fingers there existed a swelling of a dark red colour, which soon became covered with desquamated epithelium, the nails being sown with slightly prominent white spots. I ordered a pill with proto-iodide of mercury every evening, and powders of iron. In a week, the mucous

* *Traité des maladies de la peau*, 2^e édit., p. 341. Paris.

patches had disappeared, and the psoriasis was less marked, as was also the affection of the matrix of the nails. The nails, however, had not yet regained their usual characters; some presented a rather pale appearance with longitudinal furrows, in others the matrix was evidently changed, and their surfaces presented small depressions, analogous to the mark which the head of a pin would produce upon a smooth and not very hard body. The normal grooves were effaced at the point of this lesion, which occupied pretty nearly the middle portion of the nail. Despite the treatment employed, the cure was not yet completed in the month of November.

Under other circumstances, onyxia is the consequence of a pustular syphilide. A case of this kind, observed by Bassereau, shows us that the nails of the fingers presented upon their surface a large number of dull, white points, depressed and looking as if worm-eaten; their thickened, split, free edge came off in layers. Other eruptions belonging to this same period may, in the same way, cause syphilitic onyxia. We then never observe, however, deep ulcerations of the matrix of the nail. But the same does not apply to the future, where onyxia often succeeds a tubercle on the skin, or to a greyish, sanious, fetid ulcer at the side of the nail, for then the matrix becomes inflamed, the nail becomes loose, falls off, and is not reproduced until the matrix has been completely destroyed. In this latter case, the syphilitic ulcer is replaced by a cicatrix formed by some horny plates of small extent, and more or less irregular in shape.

There are cases, nevertheless, in which the primary lesion is wanting, or passes unobserved, and in which the ulceration appears to be primary; this variety of onyxia, which attacks the toes more frequently than the fingers, has been described by Delpech.* “A very unusual, and at the same time very distressing symptom,” says that observer, “is a spontaneous ulceration of the secreting organ of the nail, either of the hand or of the foot. Pain arises spontaneously, or on the occasion of some slight violence, round the root of a nail, and under its extremity. The ulceration first shows itself externally around the root of the nail. It usually presents a fungous, moist, brownish surface, which readily bleeds when touched, and furnishes an ichorous and fetid discharge. The extremity of the nail becomes detached, and this separation, which extends insensibly towards the base, is soon followed by ulceration of the new

* *Chirurgie clinique de Montpellier*, 1823, t. i. p. 365.

surface. If the oozing from this surface is but slight, as is sometimes the case, the nail preserves its consistence, or is but little softened. It is of a pale white colour, slightly turgid, and turned outwards. If, on the contrary, the suppuration which proceeds from the parts left by the nail is abundant, the ulceration of these latter is deeper, their separation from the nail extends further towards the root, the nail itself is more softened, insensibly becomes decomposed and reduced to a few shreds of horny matter which occupy the region called the lunula, become warped outwards, and are seated in the middle of an extensive ulceration. In this state of things, which is the highest degree of development, unless there is necrosis of the first phalanx, the extremity of the finger or toe is very turgid, of a violet colour, and the patient generally feels severe pains, which may even disturb the great functions of the economy." These various lesions of the nails form part of the period of secondary symptoms, and coexist, generally, with cutaneous eruptions; in a case related by Vidal, the ulceration of the nails appears to have coincided with syphilitic epididymitis.

Such are the chief varieties of syphilitic affections of the nails belonging to the period of general eruption. There are other manifestations having the same seat as the preceding, and differing from them only by the more serious consequences of the elementary lesion, and by their more tardy appearance, which will occupy us later on. As regards the former, they represent two varieties, according as there is or is not ulceration of, and a serous oozing from, the matrix of the nail. The secreting ungual syphilide, *paronychia syphilitica* of some authors, consists especially in the change at the circumference of the matrix of the nail; it has been well described by Delpech, as we have just seen. The dry ungual syphilis has been made the object of special study by A. Cazenave.

"The nail," says that author, "which is sometimes dotted at several points, becomes greyish, dry, and brittle at its free edge only. Sometimes, independently of these changes, it becomes thickened in two-thirds of its extent, opaque, its exfoliated surface is wrinkled, and, which is remarkable, there is generally a distinct line of demarcation between this diseased portion and the sound portion, which retains its polish and colour. In some cases, however, the change in structure is general, and the nail is converted into a horny, dry, greyish, very brittle body. This form, which was well known to the ancients, is, I repeat, very common. It is rarely that syphilis

exists long without the patient's nails becoming more or less affected. It is always secondary, and is sometimes the only symptom which betrays the existence of a consecutive syphilis." *

The course of secondary syphilitic onyxia is generally slow, but less so than that of the affection of the nails which accompanies the later symptoms; recovery is its usual, if not constant termination. The prognosis is favourable, the only disadvantage being that which results from the falling off of the nail, and the anxiety felt by the patient.

Diagnosis.—The antecedents of the patient, and the affections which accompany the changes in the nails, are the circumstances to be taken into consideration if we wish to arrive at an exact diagnosis of syphilitic onyxia. In the moist or ulcerating form of this manifestation, the affection might be confounded with that described under the name of a *nail growing into the flesh*. But the ulceration in this latter case, usually of little depth, does not occupy at first the matrix of the nail.

Psoriasis of the tips of the fingers is not without analogy with the dry form; but if not distinguished by its objective characters, is so, at least, by the habitual coexistence of patches of psoriasis on the elbows and knees. The clubbing of the fingers in persons suffering from heart disease or pulmonary phthisis, not usually bringing with it any appreciable derangement in the nutrition of the nail, will not suggest the idea of syphilitic onyxia. *

§ 2. Affections of the mucous membranes.—Enanthematous syphilitic eruptions.

The secondary syphilitic manifestations of the mucous membranes are regarded, by some authors, as only a reproduction of the cutaneous eruptions, so that it is possible to recognise, on the surface of those membranes, the various elementary lesions observed upon the skin. This view appears to us very plausible, especially as it agrees perfectly with the results of our own researches.

Like the exanthematous syphilides, the affections of which we are now treating manifest themselves either by erythematous patches, papules, or pustules, which usually terminate in a slight ulceration of little depth, which leaves behind it no appreciable trace of its

* Cazenave, *Traité des syphilides*. Paris, 1843, p. 429.

passage. Hence two chief varieties of enanthematous syphilides, the one erythematous, the other ulcerative.

A. ERYTHEMATOUS SYPHILIDE (ANGINA, SYPHILITIC BRONCHITIS).

We include under the name of erythemato-enanthematous syphilide the syphilitic eruptions characterised by the appearance of simple spots. The buccal, pharyngeal, and laryngeal mucous membranes are the usual seat of this manifestation, from which the bronchi and intestines are not perhaps always exempt. Let us see what are, at these various points, the characters proper to this morbid determination.

A. *Mucous membrane of the mouth and pharynx*.—A very fair description of bucco-pharyngeal syphilitic erythema has been left us by Swediaur. "When the syphilitic poison," says that author, "is absorbed into the mass of the blood, it most frequently exerts its first influence upon the throat. The patient complains of but little pain, or simply of uneasiness and pain on swallowing. On examining the throat, we sometimes find nothing beyond considerable swelling of the tonsils and uvula, accompanied by a bright redness which extends to the surrounding parts. The patient, not suspecting the cause of his disease, believes that he has caught cold, and want of care often causes the physician to share his mistake. But the disease continues, and it is not until later that it takes on the ulcerating form."

Cullerier and Ratier,* Babington,† Ricord,‡ Alph. Cazenave,§ Bassereau,|| have also pointed out the existence of this affection. Very explicit on this subject, Baumès¶ wrote :—"There is a form of syphilitic affection of the throat which corresponds to the exanthematous syphilide; it consists of more or less irregular patches, of a more or less bright red colour, sometimes whitish at the centre, with or without swelling of the mucous membrane, losing themselves insensibly in the remainder of that membrane. These patches ap-

* *Dict. de méd. et de chirurg. pratiques*, art. Syphilides, t. xv. p. 157. Paris, 1836.

† *Hunter's Complete Works*.

‡ *Ibid.*

§ *Traité des malad. de la peau*.

|| *Traité des affections de la peau symptomat. de la syphilis*. Paris, 1852.

¶ *Traité des maladies de la peau*, t. ii. p. 447.

pear upon the palate, the velum, the pharynx, and even the inner surface of the lips and cheeks ; they do not last long, and disappear almost at the same time as the corresponding eruption." MacCarthy * lays stress upon this eruption, to which Martellièr † and Pillon ‡ devote the greater part of their so justly celebrated theses. In 114 observations of syphilis recorded by him, Pillon met with pharyngeal exanthema sixty-five times, and the appearance of this manifestation coincided, in the majority of cases, with that of the roseola. In all the cases, if it did not precede or accompany the cutaneous exanthema, the erythema of the pharynx coexisted, at least, with mucous patches of the skin or of the internal tegument.

Almost as soon as they become aware of the commencement of this affection, the patients complain of a feeling of sharp pain and dryness, which renders swallowing, even of the saliva, painful. A uniform redness, not mottled, of medium intensity, exists upon the velum, the pillars of the fauces, and the tonsils. It often invades even the posterior walls of the pharynx, but without ever presenting any appreciable prominence or solution of continuity.

Sometimes diffused at first, this redness soon becomes localised at the isthmus of the fauces, or in a part only of its extent. It sometimes stops at the external border of the pillars, at other times it invades all the upper portion of the pharynx accessible to sight ; but its boundaries are always sharply defined. This characteristic, to which Martellièr justly attaches great importance, is really very valuable ; it may, in fact, serve to distinguish this affection from simple erythematous angina. Like the latter, syphilitic erythema sometimes extends to the mucous membrane of the Eustachian tubes ; but, in general, it does not diminish the power of hearing.

Cullerier and Pillon assert that syphilitic erythema does not always appear smooth and uniform ; they have observed it with an uneven or granular surface. Several observations, recorded by Martellièr, indicate that this eruption in the pharynx is susceptible of assuming a diffused, greyish tint, resulting from a peculiar modification of the epithelium. This circumscribed tint in the form of non-prominent but sharply defined spots, generally appears upon the pillars of the fauces, and upon the tonsils. Later in its appearance, this variety

* Thèse de Paris, 1844.

† *De l'angine syphilitique.* Thèse de Paris, 1854.

‡ *Des exanthèmes syphilitiques.* Thèse de Paris, 1857.

of erythema coincides also with the more advanced eruptions of roseola.

Although pharyngeal erythema shows itself independently of the known causes of ordinary inflammatory angina, it manifests itself in some cases with such intensity that it would be possible to confound it with this latter if the antecedents did not come in aid of the diagnosis. At other times it affects a milder course; its insidious onset is scarcely observed by the patient, and all the sagacity of the physician is required for recognising it. Its duration, like that of cutaneous roseola, which it not unfrequently accompanies, is generally long, and its relapses sufficiently frequent for Pilon to have observed several cases of it. The prognosis, it will be conceived, is favourable.

Erythematous syphilide of the pharynx might be confounded with the angina of measles, or even of scarlet fever. But it is distinguished from those affections by its slight intensity and feeble febrile reaction, by its distribution in patches which usually occupy only a part of the throat, and lastly, by the habitual concomitance of syphilitic symptoms, and especially of a cutaneous eruption. Let us add that frequently, at the moment of the appearance of the erythematous syphilide of the pharynx, the primary lesion, or at the very least the cicatrix left by it, is still there to show that the patient is under the influence of the venereal infection.

B. *Intestinal mucous membrane*.—To know whether erythematous syphilitic exanthema may extend beyond the lower border of the pharynx, and manifest itself upon the surface of the intestinal mucous membrane, is a question which has not yet been perfectly cleared up. "In some young women under my care, who died of acute intercurrent affections, and in whom, amongst other symptoms, mucous patches of the throat were observed, I have never found," says Cullerier,* "any trace of these lesions below the inferior border of the pharynx; in the same way, I have never seen it above the sphincter ani in those who had the same secondary symptom at the anus." That surgeon does not deny absolutely, however, the possibility of a syphilitic enteritis. Pilon, his disciple,† relates three cases in which he does not hesitate to admit a secondary enteritis. These facts, however, being wanting in verification in an anatomical

* *De l'entérite syphilitique* (Union médicale, 1854).

† *Des exanthèmes syphilitiques*. Thèse de Paris, 1857.

point of view, cannot furnish decisive proofs. But, however this may be, the frequent occurrence of gastro-intestinal derangements in the course, or during the course of a certain number of cases of secondary syphilis, is a fact which it is impossible to deny. In this point of view, the following case is not altogether devoid of interest; it is, moreover, a good example of the multiplicity of secondary syphilitic manifestations.

Bismuthi paina, gastro-intestinal derangements, caradoform syphilide, mucous patches and syphilitic angina.

CASE. X.—Henriette P., æt. 18, Landress, is a robust young woman who has always enjoyed good health, except a painless swelling of the tibio-tarsal articulations, which she had a year ago, and which lasted several months. Her father died of pulmonary disease. Her mother and her only brother, who is eight years old, are both healthy.

About May 15th, 1860, she was seized with pains in the loins which prevented her from walking; these pains, which extended from the vertebral column towards the sides, became more severe towards 6 P.M., continuing all night to cease at the approach of day. At the same time there is uneasiness, lassitude, and loss of appetite. In the course of the month of June, diminution of the intensity of the pains; but the insomnia persists with cephalalgia, and feverishness in the evening supervenes. Towards the end of the month, there were added to all these phenomena a throat affection with pains in the neck, while the gastric derangement became more marked, there was a foul tongue with complete anorexia. An emetic was given: the same evening an eruption appeared, which soon invaded nearly the whole of the skin and suggested the idea of an attack of small-pox.

On the 4th of June, two days after the breaking out of the eruption, the patient went into the Hospital De la Pitié. At that time she had very decided gastric disturbance, foul tongue, complete anorexia, disinclination for food, bad digestion, diarrhoea, cephalalgia, and insomnia. There was, moreover, a disseminated papulo-pustular eruption, most abundant upon the abdomen and back, scanty upon the limbs, and entirely wanting on the parts usually uncovered. This eruption, very analogous to a miliary eruption, was composed of small papules having at their summits pustules still smaller. These papulo-pustules soon became covered with small scales which fell off in a short time, leaving a circular spot of a coppery tint. The patient had also mucous patches of the anus and vulva; and, further, angina of the pharyngeal mucous membrane characterised by a brownish or bronzed colour. She was ordered an emetic and, days after, Van Swieten's drops (bichloride of mercury) to the extent from 10 to 15 grammes per diem.

short time the eruption becomes effaced, the mucous patches disappear, the diarrhoea ceases, the angina disappears, and the digestive system is re-established. The medicine is stopped. Six or seven days

later, the patient was seized with very severe pains in the fore-arms and legs. She has fever. On the anterior part of the tibia are seen red patches, slightly clammy, very painful when pressed, syphilitic periostitis. Ordered proto-iodide of mercury, opium, and blisters.

On the 15th of August, the state of the patient was sensibly ameliorated, when she was again seized with uneasiness, lassitude, cephalalgia, oppression, palpitations, and fever (pulse 100); she was sleepy during the day, sleepless at night. On the following days her condition was the same, with the addition of epistaxis, which returned almost daily for a week. The patient completely lost her appetite and complained of the sensation of a foreign body rising in the throat. The use of iodide of potassium caused rapid improvement, and the patient went out September 8th.

To sum up, gastro-intestinal derangements precede and accompany a papulo-pustular syphilide and a syphilitic angina; an appropriate treatment soon gains the ascendant over all these symptoms, then the same evils reappear with periostitis, to cease at last under the influence of a treatment which tends to check the change in the periosteum. A double question presents itself here. Is it to the syphilis that is to be attributed the derangement of the digestive functions and, in that case, does it result from a lesion of the gastro-intestinal mucous membrane analogous to that of the pharyngeal mucous membrane? The simultaneous progress of the gastric derangements and of the cutaneous and periostitic manifestations certainly disposes us to recognise, in these different symptoms, only different localisations of one and the same morbid action. But this fact and a few others are not enough to allow of our affirming that the mucous membranes of the stomach and intestines may, like that of the pharynx, become the seat of secondary manifestations. So that, even taking into account the data furnished by analogy, it is prudent to wait for new facts before forming a decided opinion on this point.

c. *Mucous membrane of the nose, the larynx, and the trachea.*—The Schneiderian membrane does not always escape the attacks of secondary syphilis; sometimes red and turgid, it secretes a scanty, thick, yellowish matter, there is stoppage of the nose and loss of smell, and, but for the absence of sneezing, a common cold would be suspected.

This modification recurs, with very similar characters, in the larynx. Syphilitic erythema of the larynx has only been well studied since the invention of the laryngoscope. The researches of Czermak and

L. Turck* already tend to prove that this erythema does not differ sensibly from that which, under the same influence, sometimes invades the mouth and pharynx; the interesting observations of Cosco, noted in the thesis of Dance, his disciple,† do not leave the least doubt of the correctness of this view. Syphilitic erythema of the larynx generally appears at the same time as roscola; starting from the isthmus of the fauces, it advances towards the glottis and epiglottis, instead of the pharynx, and rapidly invades the whole portion of the mucous membrane above the glottis, as well as that of the superior and inferior vocal cords. The dark or mottled redness which characterises it is sometimes in the form of perfectly distinct, well-defined patches, sometimes, on the contrary, it is completely diffused and without very appreciable boundaries. To this redness is sometimes added a slight tumefaction, most frequently confined to the region above the glottis, the arytenoid cartilages, and the upper vocal cords.

It is very admissible that the tracheal mucous membrane may become the seat of similar changes, but no very positive data exist, as yet, as to this point.

The symptoms of secondary syphilitic laryngitis are objective or functional; we already know the former. As regards the latter, if respiration is, in general, but little impeded, it is not always the same with the voice. The patients, on speaking, have the sensation of a foreign body in the throat; the tone of the voice, rather than the power, is changed, the voice is hoarse or rough. This modification, according to Dance, was observed three times in thirteen cases of erythematous syphilide, seven times in sixteen cases of papular syphilide. Diday, of Lyons, appears to us to have described very well this change of the voice; but he is wrong, we believe, in attributing it to paralysis of the muscles of the larynx. "From the third to the sixth month after the appearance of the primary lesion, the patient, without having been exposed to the causes, or presenting the symptoms of either coryza, angina, or bronchitis, observes that he can no longer emit the same volume of sound as usual; the voice has lost its tone, the change increases rapidly, in a few days it has arrived at such a degree that when he endeavours to force his voice,

ther on, Bibliographie des affections syphilitiques du larynx. *ms du larynx survenant dans la période secondaire de la syphilis*, 1864.

PERIOD OF GENERAL ERUPTION.

he only succeeds in producing a whisper scarcely perceptible to the ear. Except the change in sonority, the other functions of the vocal apparatus remain intact. The pronunciation is clear and distinct, the respiration perfect; there is neither pain, nor cough, nor dyspnea, nor fever."*

Syphilitic erythema of the larynx runs a course more slow than that of the common phlegmasiæ of that organ. Unlike the more deeply-seated affections, its termination is always a favourable one. This manifestation does not present generally, even on examination with the laryngoscope, any specific character, and thus the certainty of its diagnosis depends, above all, upon a knowledge of the anterior and concomitant affections. Let us add, that cases of true inflammatory laryngitis are easily distinguished by the febrile condition which accompanies them, while the more frequent cases of chronic laryngitis, resulting either from the abuse of spirituous liquors, or from a tubercular or herpetic diathesis, have as an element of the diagnosis, in the one case the special antecedents of the patient; in the other, the concomitant diathetic manifestations of the laryngeal affection.

D. *Mucous membrane of the bronchi*.—Authors of high authority agree in recognising the existence of a secondary syphilitic bronchitis. Stokes† asserts that syphilitic bronchitis shows itself in the acute and in the chronic form. In the first case, it is analogous to the bronchial irritations of the exanthems, while in the second, there is a chronic irritation which, combining with the syphilitic cachexia, closely resembles phthisis. The acute form, the only one of which we are now treating, is observed at a longer or shorter period after infection; the patient presents fever with all the symptoms of bronchial irritation, and, in a few days, a confluent eruption of patches of a reddish-brown colour appears upon the skin, and the internal affection often ceases entirely. Byrne, of the Lock Hospital in London, states that he has frequently seen patients who, having entered the hospital after a first infection, were seized with an intense febrile bronchitis. The attack was sudden, and the distress sometimes so great that bleeding became necessary. Almost immediately a copious eruption was observed to appear, which had all the characters

* *Gaz. méd. de Lyon*, No. 2, 1860. Note upon a form of syphilis
aphonia little known.

† *Diseases of the Chest*, p. 93. London.

cession of the squamous affection: the bronchitis ceased at that moment. I do not know exactly which part of the lung it is which, in such cases, undergoes the influence of the syphilitic process, but he thinks that it is more particularly the bronchial mucous membrane, although syphilis may, like scarlet fever and measles, sometimes produce pneumonia.

Such is the state of our knowledge relative to secondary syphilitic pneumonia. Hitherto observed almost exclusively in England, this manifestation of syphilis has been the object, so far, of a study too incomplete to justify us in asserting it without reserve. I must confess, however, that I have seen all the symptoms of a sub-acute inflammation of the bronchi, including dyspnoea, supervene and develop themselves in a young woman who, a few days after, was the subject of a distinct syphilitic eruption. But this isolated fact, although confirming those of the English writers, does not authorize us to regard as certain the existence of a syphilitic enanthema of the trachea and bronchi.

B. SUPERFICIAL SYPHILITIC SYPHILIDES OF THE MUCOUS MEMBRANES.

Under this denomination we include all the syphilitic affections of the internal tegument which, at a given moment in their evolution, express themselves by multiple and superficial ulcerations. Usually contemporary with exanthematous eruptions, these manifestations commence by elementary lesions closely resembling the papules or pustules studied above. The mucous membrane of the conjunctiva is favourably situated for enquiring as to recognise this resemblance. There, in fact, we are able to follow the various phases which the change undergoes.

According to Lawrence,* the syphilitis may become the seat of syphilitic ulcerations which, sometimes after the manner of a sty, commence by a slight ulceration near the ulnar border, to spread upon one or other of the conjunctival or mucous surfaces, and which sometimes appears in the form of a pustule at the outer angle of the eye. At all events, when we consult the cases related by this author, we see that it is only in a small number of them that we can clearly

* *Med. Memoirs*, London, 1817, p. 181.

† *A Treatise on the Venereal Disease of the Eye*. London, 1830; and *Ch. Clin. de M. J. C. xxxv*, p. 174, 1842.

connect these lesions with the secondary period; but, nevertheless, the existence of secondary eruptions of the eyelids cannot be denied. Eruptions upon the ocular conjunctiva can also not be doubted, despite their rarity, which is so great, according to John France,* that only three cases were observed, in a period of sixteen years, in one of the largest hospitals of London. These eruptions, in four cases related by that author, appeared in the form of small, circumscribed, prominent, non-vascular spots of a reddish-grey, yellowish, or coppery colour, not differing greatly from the concomitant cutaneous eruptions.

The nostrils, the tongue, the anterior pillars of the velum palati, the tonsils, and the internal surface of the pharynx, such is the usual seat of the eruptions, which end by ulcerating the mucous membrane. The ulcers of the tongue occupy the tip and the edges in preference to the upper surface; they have the appearance of small, yellowish, disseminated points, which may cause a very uncomfortable pricking sensation. They sometimes follow mucous patches, and it is rather difficult, in certain cases in which they appear in the form of fissures, to distinguish them with certainty from these latter morbid determinations.

Known to Hunter, who pointed them out under the denomination of ulcerating excoriations, and regarded them as foreign to syphilis, the superficial ulcers of the pharynx were confounded by Babington with mucous patches. Correctly appreciated by Baumès and Cazenave, they have been studied by Martellière. Numerous in the region of the velum palati and its pillars, they are sometimes preceded by an uniform erythema, with dryness and pain at the moment of swallowing.† They show themselves at first in the form of small prominences, which appear to be only small glands augmented in volume. To these prominences soon succeed ulcers, surrounded by a circle of a dark red colour, and covered with a yellowish pultaceous matter. Superficial, round, or in the form of an elongated fissure, these ulcers have a greyish or pale floor, covered with flattened pimples. Generally painful when touched, they cause a continuous sensation of heat and smarting, which is more intense at night (Martellière). Baumès compares them, for their appearance and their irregular form, to a

* On syphilitic eruptions of the conjunctiva, in *Guy's Hospital Reports*, t. vii. 109, 1861.

† Compare Rufz, *De l'angine syphilitique*, *Journ. hebdom.*, t. viii. 1832.

burn of the first or second degree. When they begin to heal, the inflammatory circle pales, the epithelium is reproduced from the edges towards the centre, and they become effaced without leaving any traces beyond a brownish or greyish tinge, which remains for a certain time before the mucous membrane completely regains its normal condition.

The aphthæ, stomatitis, and angina produced by mercury are the affections which most nearly resemble secondary ulcers of the bucco-pharyngeal mucous membrane. The aphthæ—the analogy of which to vesicular affections of the skin is such as to have induced Bateman to compare these lesions to eczema—form small, white elevations, which not unfrequently present slight excoriations, but the volume of which does not usually exceed that of a large pin's-head. Moreover, their duration is short, and they always heal rapidly. Mercurial stomatitis, by the odour which it exhales, and the swelling of the gums which it produces, cannot occasion any doubt. The same cannot be said of mercurial angina, a rare affection, no doubt, and generally, though wrongly, denied.

In a paper on the diseases produced by mercury, Colson * already described mercurial ulcers of the pharynx, the characters of which resemble those of syphilitic ulcers. G. L. Dietrich † does not hesitate to admit the existence of a mercurial pharyngitis, characterised by a mottled redness distributed in isolated patches, on which are seen, here and there, yellow, pisiform points, slightly elevated, due to the development of the mucous follicles. But, despite the legitimate authority of these authors, and of several others whom I could quote, doubt still exists as to the existence of mercurial angina. The following case, however, which I saw with my learned teacher, Dr. Hérard, does not appear to me fitted to justify the opinion of those who refuse to mercury any influence upon the mucous membrane of the pharynx. It may serve, moreover, to make known the differences in the symptoms which separate mercurial angina from syphilitic angina.

Mercurial angina and stomatitis.—Itch.

Obs. XI.—P., a hatter, æt. 18, entered the Hôtel-Dieu Hospital under the care of M. Hérard, June 4th, 1864. He is a dark, lymphatic youth,

* *Journ. hebdomad.*, 1831, p. 36.

† *Die Mercurialkrankheiten*, p. 267 *et seq.* Leipzig, 1837; and Martellière, *loc. cit.*, p. 64.

of small stature, but generally healthy. His father died from disease of the peritoneum. His mother and four sisters are in good health. Three months before, P. observed a small ulcer on the lower part of the mucous membrane of his penis, which disappeared at the end of about three months; on admission, this ulcer was replaced by a cicatrix, which was neither *indurated*, nor *depressed*, nor *coloured*. The absence of these three characteristics and the short duration of the ulcer gave rise to the belief that it had not been an indurated chancre.

In any case, on first observing the ulcer, P. consulted a druggist, who gave him an ointment with which to dress the wound and some pills to take. The patient took forty of these, and had given up this treatment for some days when there appeared in his throat and mouth an affection which, on entering the hospital, was of three weeks' standing, and presented the following symptoms; factor of the breath, painful swelling of the gums; on the right buccal wall, a yellowish exudation of the size of a franc piece; exudations of the same kind on the tonsils, especially on the right one. Multiple, sub-maxillary adenopathies. A gargle of chlorate of potash prescribed by M. Hérard was continued.

The pseudo-membranous concretions soon became detached, and three ulcers of little depth, about the size of a centime, were observed, one situated upon the posterior part of the tongue, another on the right tonsil, the third on the right buccal wall, the latter of which was not yet entirely freed from its pseudo-membranous concretion. The improvement from this moment was most rapid under the influence of the chlorate of potash, so that the patient went out almost completely cured, on the 13th of June. I may mention, cursorily, that this patient had the itch, and that he was freed from it in one day by frictions with black soap and Helmerich's ointment, and some sulphur baths.

The laryngeal mucous membrane is not entirely exempt from the syphilitic ulcers in question. They follow a papular eruption, and do not generally reach the larynx until after having previously invaded the tonsils, the velum palati, and the isthmus of the throat. They more rarely first appear in the larynx, and then there are observed greyish papules, bordered by a red line, most commonly exulcerated so as to simulate mucous patches. Their favourite seat is almost the same as that of erythema, that is to say, the portion of the larynx above the glottis and the upper and lower vocal cords. In the vicinity of these various parts a slight tumefaction is observed, and at the same time a more or less marked thickening of the edges of the epiglottis. Hoarseness and roughness of the voice, and a slight cough, are the chief symptoms which correspond to these ulcers; but as these symptoms do not differ notably from those of syphilitic erythema, it results that there is sometimes difficulty in distinguish-

ing these two lesions, a circumstance fortunately of little importance, either for the prognosis or the therapeutic indications.

MUCOUS PATCHES.

Synonymy: Moist pustular syphilide (Bassereau).—Flat pustules.—Mucous pustules.—Moist papules.—Flat tubercles.—*Pustula fœdantia*.

The exact description of these lesions is of very recent date; any allusion to them in the writings of the syphilographers of the fifteenth and sixteenth centuries being difficult to make out. It is not unreasonable to believe, however, that there was question of these eruptions in this passage from N. Massa, relative to pustules:—“Apparent rubæ, elevatæ, magnæ, humidæ et tumidæ.”* G. Fallopius† and Forestus‡ also point out these effects of syphilis, of which Ricord,§ Legendre,|| Davasse and Deville,¶ Bassereau, Bazin, &c., have recently given a description which leaves little to be desired.

Manifestations altogether peculiar to syphilis, mucous patches are, moreover, one of the first symptoms of that disease; but, on account of their frequent relapses, they may be one of the latest lesions of the period of general eruption. It is for this reason that we have thought this would be their most appropriate place. Moreover, it is rare for them to be isolated, or not to coexist with one of the early superficial syphilides.**

Lesions eminently contagious, these symptoms are characterised by elevations of the skin or mucous membranes, the borders of which are distinctly circumscribed, and the surface more or less moist and

* Nicolas Massa, *Aphrodisiacus*.

† Gabriel Fallopius, *Aphrodisiacus*.

‡ Forestus, *de lue venerea*, t. xxxii. obs. xxi.

§ Ricord, *Notes to Hunter*, p. 573.

|| Thèse de Paris, 1841.

¶ Davasse and Deville, *Archiv. génér. de médecine*, October, 1845.

** Moist papules were observed by Bassereau in—

198	cases of erythematous syphilide	.	88	times.
50	„ dry papular	„ . .	14	„
12	„ vesicular	„ . .	4	„
71	„ pustular	„ . .	37	„
54	„ tubercular	„ . .	—	„

whitish. Their form is that of a large papule, or of a flattened, circular, ovoid or ellipsoid tubercle. Of a white, rose, or violet colour, they have never the peculiar or even characteristic tint of the cutaneous eruptions. Their surface, which is more or less prominent, is dry, or more frequently moist, from the secretion of a dirty, fetid fluid, which is, to the neighbouring parts, an agent so irritating that it sometimes causes the development of numerous vegetations.* Their consistence is generally soft, and it is but rarely that they are accompanied by pain or itching.

Their development thus takes place spontaneously on the surface of healthy tissues, or in consequence of the transformation *in situ* of a chancreous ulcer (Davasé and Deville). In the first case, there appears at first a red spot, due to congestion of the skin or mucous membrane. This spot gradually spreads circularly, the epidermis which covers it is raised by a small quantity of serous fluid, but the layer of epithelium soon being torn, a surface of a bright red colour, sometimes surrounded by a whitish ring, is thus laid bare and soon becomes covered with a greyish white, moist pellicle. In the second case, the greyish and often depressed surface of the chancre becomes red, granulating, and prominent from the circumference to the centre. Then at the moment at which the red granulations at the centre announce that the cicatrix is about to be formed upon the whole surface, the white plastic secretion characteristic of the moist papule is seen to appear. Granulation sometimes proceeds so rapidly that cicatrization has not commenced at the circumference of the chancre when the plastic secretion occurs upon the whole surface; then the moist papule suddenly ends in a jagged border (Davasé and Deville). The condition of this transformation is, that the ulcer should be constantly moist, as happens when the part which is the seat of it comes in contact with another part.

Mucous tubercles appear in various forms. On the skin, according as the surface is dry and moist, they are—patches covered with a yellow transparent crust, sometimes with a cup-shaped depression and surrounded by a swelling which serves as a frame (Bazin); mammillated moist protuberances, flat condylomata; lastly, fissures more or less elongated. On the surface of the mucous membranes,

* Other causes of irritation, for instance the mucous secretions of pregnant women, may develop these same vegetations. See Thibierge, *Archives de médecine*, May, 1856.

the moist papules are generally little if at all prominent, covered with a whitish pellicle resembling in every way the slight eschar produced by cauterisation with nitrate of silver. These papules, which have received the name of opaline patches, are surrounded by mucous membrane which is either sound or of a dark red colour forming a kind of inflammatory ring around them. Wherever friction takes place, the whitish opaline pellicle disappears, and then the mucous patches become bleeding, eroded, ulcerated, or covered with diphtheritic patches; hence symptomatic differences with which it is important to be acquainted.

Seat of mucous patches.—Mucous patches may invade all the regions of the body, but the genito-anal region is, in adults, their favourite seat. After the vulva and anus, they are met with most frequently on the inner and upper part of the thighs, on the tonsils, in the mouth, upon the lips, in the inter-digital spaces, about the nipples (in women), in the groins, and about the ears. It is to be remarked, in a general way, that they occupy by preference the mucous membranes which undergo the influence of the air and the portions of the skin exposed to a certain degree of warmth and moisture.* Usually multiple, they are met with in men and in women, but more frequently in the latter, in consequence, no doubt, of the special conformation of their genital organs. In each sex they have their particular favourite seats.

Davasse and Deville found, in 186 women :—

				Times
Mucous patches situated on the vulva	.	.	.	174
„ „ on the anus	.	.	.	59
„ „ on the perineum	.	.	.	40
„ „ on the buttocks, and upper and inner part of the thighs	.	.	.	38
„ „ on the tonsils	.	.	.	19

* It is important to know that mucous patches most frequently depend upon habits contracted by the patients or upon a want of cleanliness. Thus they are comparatively common in the mouth in smokers, and on the genital organs of women who perspire much and are not cleanly in their habits. The persistence and relapses of these manifestations generally arise from these various circumstances, and it is only by bearing them in mind that we are enabled to combat them successfully. In certain cases, they attain a great tenacity without its being possible to connect the cause thereof with anything else than the peculiar constitution of the patient.

					Times
Mucous patches situated	on the nose	.	.	.	8
"	"	on the tongue	.	.	6
"	"	on the toes	.	.	5
"	"	on the face	.	.	5
"	"	on the umbilicus	.	.	3
"	"	around the nails	.	.	2
"	"	on the ears and velum	.	.	2
"	"	in the inguinal fold	.	.	2
"	"	on the neck, the nipple, the neck of the uterus	.	.	1

Some statistics by Bassereau give the following distribution in men :—

					Times
Mucous patches situated	at the anus	.	.	.	110
"	"	on the tonsils	.	.	100
"	"	on the scrotum	.	.	60
"	"	on the mouth, on the lips	.	.	55
"	"	on the glans and internal surface of the prepuce	.	.	28
"	"	on the pillars of the velum palati, the tongue, and the inner surface of the lips	.	.	73
"	"	in the spaces between the toes	.	.	11
"	"	in the scroto-crural fold	.	.	5
"	"	at the orifice of the nostrils	.	.	2
"	"	on the posterior wall of the pharynx	.	.	2
"	"	at the insertion of one of the toe-nails	.	.	2
"	"	at the meatus urinarius, in the axilla, on the gums, on the internal surface of the thighs	.	.	4

Rather peculiar characters correspond to these differences of situation. Thus, upon the skin, the dry patches are observed chiefly where there is no contact of two surfaces, while the moist papules are met with in regions like the scrotum, in which the skin is thin, and liable to friction. Lastly, the fissures occupy by preference the cutaneous folds, and especially those in the neighbourhood of the anus. In this latter region, the mucous patches are sometimes numerous, large, and prominent, so as to form a collar which may

obstruct more or less the anal orifice and interfere with defæcation by the pain which its presence occasions.

Mucous patches of the internal tegument are, on the vulva, large, flattened, granular, covered with an abundant whitish exudation, which exhales a repulsive fetid odour; they occupy almost always the two corresponding surfaces of the labia majora, sometimes concealing in their midst the primary lesion. From the contact of their product of secretion there develops itself on the neighbouring parts, and chiefly on the inner and upper surface of the thighs, an erythematous redness which is itself the starting-point of a fresh eruption of mucous tubercles. On the neck of the uterus, they present themselves in the form of rounded erosions, the bright red surface of which secretes a thin muco-purulent matter which, without the aid of the speculum, might be mistaken for gonorrhœal discharge. Rather rare on the surface of the glans and prepuce, they most frequently put on the form of rounded or oval superficial erosions of a very bright red colour, which secrete a muco-purulent fluid, and are covered with a more or less abundant exudation.

In the mouth, the characters of the mucous patches vary according to the period at which they are examined. Simple rounded spots at first, they are of a deep violet colour; but soon, the epithelium being destroyed, it is replaced by a kind of soft and yellowish false membrane; later on, ulcerated in part of their extent, they present irregular edges and an uneven surface, dotted with fine and abundant granulations. Under these circumstances, movement of the lips is impeded, and the introduction of food causes a constant burning sensation in the whole buccal cavity. Very frequent about the lips of smokers who use a pipe, this lesion commences by a spot similar to that produced by nitrate of silver; this spot gradually becomes surrounded by a mottled ring at the centre of which an erosion is soon observed, resulting from the giving way of the epithelium. Mucous papules of the tongue show themselves by preference on its upper surface and edges; they begin by rounded or oval mottled patches of large antero-posterior diameter, they are smooth and depressed, but, if left to themselves, become covered with granulations, reach the level of the sound parts, and finish by passing it and forming, sometimes, a rounded projection resembling the head of a nail. They also show themselves there sometimes in the form of fissures. On the velum palati and tonsils, these same lesions, which interfere more or less with the motions of deglutition, take on

at a certain period an ashy or whitish tint, and lastly become covered with a kind of yellowish false membrane, beneath which is often found a slight erosion. At the same time, the tonsils are generally swelled, and the corresponding sub-maxillary glands are the seat of a modification dependent, to a certain extent, upon the various phases in the evolution of the mucous patches.

The mucous membrane of the respiratory passages does not always escape this form of change. Mucous patches have been seen on the internal surface of the larynx, in the region of the supra-glottideal portion, and of the superior and inferior vocal cords.* Five times out of six cases, Cusco has pointed out the presence of these lesions—four times at the internal portion of the arytenoid cartilages, a single time on their summit (Dance, *loc. cit.*, p. 28). A slight swelling, with change of colour, indicated their presence. More rarely, mucous patches are observed to affect the organs of the senses.

About the ear they are generally situated behind the concha, or in front of the lobe, sometimes in the meatus auditorius externus. Their characters are otherwise the same as those which we have assigned to mucous patches in general.

About the nose, the mucous patches occupy the entrance to the nostrils, and most frequently their external angle, where they form a protuberance in the shape of a crescent, which, like the mucous tubercle of the commissures of the lips, may crack, and even become covered with crusts. They are seen also, with the aid of the laryngoscope, at the posterior part of the nasal fossæ. A fetid coryza is the sign of this lesion, and when to this coryza is added watering of the eyes, it is a proof that the disease has extended to the nasal canal. Lastly, in some cases, mucous patches have been seen to occupy the palpebral angles, and even to extend as far as the conjunctiva; their appearance there, however, presented nothing peculiar.

Whatever their seat may be, the mucous patches may react upon the neighbouring glands, and cause suppuration of them, in consequence of the absorption occurring at their surface. In any case, it must not be forgotten that adenopathies frequently precede the appearance of flat tubercles. The fever which accompanies or precedes them may, in certain cases, especially in women of dirty habits,

* T. Gerhardt and F. Roth (*Archiv für patholog. Anat. und Physiolog.*, t. 21) have shown, by the aid of the laryngoscope, that out of fifty-four cases of secondary syphilis observed at the Würzburg Hospital, the hoarseness was produced in eight of them by large condylomata.

be the consequence of a secondary infection indicated by *rigors* more or less severe.

The course of mucous tubercles is chronic, in spite of certain phenomena apparently acute. The duration of their successive eruptions is of several months, but may attain a year if the affection be left to itself. In any case, a general treatment or even simple attention to cleanliness, soon gets the better of them. Resolution is their most usual termination; in proportion as it proceeds, the sores cease to secrete, and it often happens that the central portions heal before the edges, so that more or less complete segments of circles are produced. Lastly, the tubercles become effaced without leaving permanent cicatrices, but sometimes merely an elevation which gradually disappears entirely.

Mucous patches are liable to relapses; those of the mouth and tongue, very remarkable in this respect, sometimes show themselves several years after the disappearance of the chancre. I have seen some which appeared three years after the primary lesion. They constitute, in such a case, one of the best indications of the standing of the syphilis; so long as they exist, in fact, it may be asserted that that disease has not yet reached its last phase.

Diagnosis and prognosis.—The objective characters of the mucous patch, and especially its soft consistence and moist surface covered with a whitish pellicle, render its diagnosis easy. Moreover, it is not easy to confound this lesion with the chancrous ulcers. Soft chancre, in fact, is not prominent; it has perpendicular edges and the pus which it secretes is inoculable upon the patient himself. Infecting chancre is hollowed out, it presents a characteristic chondroid induration, and has for its constant satellite an indolent, firm, and movable adenopathy. Herpes preputialis, which might be taken for ulcerated mucous patches of the glans, is distinguished by the grouping together of ulcers which are always preceded by vesicles. Eczema, on the other hand, differs from the mucous tubercles of the anus by the absence of projections, and the presence of yellowish crusts or of greyish scales upon a red, oozing surface.

The difficulty of the diagnosis of mucous patches is especially in the multiplicity of their seat, and in this respect it is easy to imagine the numerous errors to which these lesions may give rise. Mucous patches of the mouth and under surface of the tongue, those, for example, of the inner surface of the lips which show themselves for years, might easily be taken for aphthæ if we did not take into

account their duration, their objective characters, and the habitual concomitance of exanthematous eruptions. These latter circumstances will plead in every case in favour of mucous tubercles.

The prognosis of the moist papule is comparatively favourable. This affection is, in fact, one of the most benignant manifestations of constitutional syphilis. According to Bassereau, it is almost a guarantee against the more severe ulterior syphilitic symptoms. If it has been preceded by a benignant chancre and if it is the only existing eruption, it indicates a feeble disposition of the economy to produce syphilitic lesions, since the eruption only manifests itself at the points of the skin which are most predisposed.

ON SOME AFFECTIONS OCCASIONED OR ENGENDERED BY THE PRESENCE OF PRIMARY OR SECONDARY SYPHILITIC LESIONS.—VEGETATIONS.—GLANDULAR HYPERTROPHIES, &c.

The primary syphilitic ulcer, and of the lesions of the period of general eruption, mucous patches in particular, modify in certain cases, by their secretion, the nutrition of the adjacent parts, so as to produce in them changes altogether peculiar. The most frequent of these changes are vegetations (called also cauliflower excrescences, warts, figs, cocks'-combs, &c.), a kind of papillary hypertrophy, which has for its usual seat, in men the glans, in women the labia minora or majora,* and which is also met with at the verge of the anus and in the larynx.†

But there is a considerable number of other derangements of nutrition dependent upon the same cause: such is, for instance, the hypertrophy of the tonsils which follows syphilitic angina, chiefly when accompanied by mucous patches; such is the elongation and hypertrophy of the prepuce with contraction of its opening, which manifests itself after the appearance of a chancre; such is also the hypertrophy of the labia majora observed not unfrequently after chancres or mucous patches, and which, when it attacks at the same time the nymphæ and some of the carunculæ myrtiformes, may simulate the various forms of erosion of the vulva. Such, lastly, Professor Gosselin,‡ who has justly insisted upon the connection of

* Costilhes and Boys de Loury, *Rem. prat. sur les végét.*, *Gaz. Méd.*, p. 314, 1849.

† Huguier, *Gaz. des hôpitaux*, 1859. Turck, *Recherches sur les maladies du larynx*. Paris, 1862.

‡ *Archiv. gén. de médecine*, p. 685, December, 1854.

These various symptoms will sometimes, however, be the so-called "functional" symptoms of the nervous system, or affection to which we shall refer as "neurasthenia". The greater number of these derangements consist in a general debility of the system or organ in question, and in some instances a sensation, but they offer further no symptoms, and are entirely dependent upon the degeneration of the system, and are accompanied by the loss of generalization of the system, and the loss of the general loss of sympathy.

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the first and most common of the eruptive manifestations of the disease, which usually appear at the period of their appearance in the form of small, raised, red, papules, which are sometimes accompanied by a mild, erythematous, or even vesicular, eruption. In this account, are to be found the principal features of the disease, which, as we have already said, is a disease of the skin, and of the mucous membranes of the mouth, but all the symptoms which are to be seen in the course of a more particular description of the disease, are the eruptions from the glands, the eruptions from the mucous membranes, and of the special senses, the eruptions from the skin, and the eruptions from the skin.

... ..

THE FUTURE OF THE JUDICIAL SYSTEM

THEY WERE NOT EVEN ALLOWED TO SEE THE BODIES.

STANDARD SURVEY QUESTIONS AND ANSWERS

2. Secondary Alterations—During the period of general contraction the changes in the form of these periods are insignificant, except in the change in the length of the periods, which corresponds to the change in the second moment of the general set of several orders of the body.

Always involved during the continuance of the disease, the inguinal glands are still those most frequently affected in the course of the secondary syphilis. The next in order of frequency are the cervical glands, especially those which occupy the roots of the right and left of the median line; the glands in the mastoid process; more rarely the sub-maxillary, epitrochlear, popliteal, &c. It is rarely as early as the third

PERIOD OF GENERAL ERUPTION.

week after the appearance of the primary lesion, but rather about the fifth or sixth, or even after the sixth (Ricord), that the invasion of the lymphatic glands of these latter regions commences.

The question whether these adenopathies are a direct manifestation of the general infection or merely a symptom of a neighbouring local lesion has long been discussed without having yet received a definite answer. Both hypotheses are possible; like Ricord and Puche, I have met with induration of the posterior cervico-occipital and mastoidean glands in individuals whose hairy scalp was perfectly sound. In these patients there was reason to believe that the morbid action had been exerted directly upon the lymphatic system; and this view appears to me to be confirmed by the circumstance that there is most frequently no relation between the adenopathy and the eruption. Side by side with these cases, there are others in which a local influence cannot fail to be recognised, and in which there exists an undoubted intimate connection between the adenitis and the eruption which accompanies it; but the adenopathy then assumes an inflammatory type more markedly acute and shows itself with characters differing from those which follow.

The gland, which presents at first only a tumour of the size of a hempseed, hard and movable, gradually increases in volume without attracting the attention of the patient; a second and a third gland become affected in the same manner. Then, as soon as they have attained the size of a nut, these glands remain stationary, without causing any very appreciable pathological derangements, beyond perhaps chloro-anæmia and, in some cases, impediment of the motions and regular play of some of the neighbouring organs. These adenopathies, which offer the greatest analogy to the buboes symptomatic of indurated chancre, never attain a large size; movable, indolent, multiple, and of a firm and elastic consistence, they retain these characters during their whole continuance, except under special individual conditions (scrofula). The mobility peculiar to them is not, however, equal everywhere; it is generally less in the glands situated at the roots of the hair or in the mastoidean region. But that is an exception with which it is necessary to be acquainted, and which the anatomy of those regions fully explains.

At the same time that these glandular modifications exist, the lymphatic vessels are sometimes the seat of a peculiar change (adhesive lymphangitis). They give to the touch the sensation of small, hard, movable cords, enlarged here and there in the vicinity of the

vaives. Barin (p. 16), who was one of the first to point out this fact, insists with Sigmund* upon the presence of these lymphites at the upper and inner part of the thighs and arms, seeing that, in an obscure case, their presence may become a valuable element of diagnosis.

Adenopathies and lymphangites are affections remarkable for a slow course and long duration, rarely disappearing with the eruption which they accompany. They endure for months or even years, at least in cachectic or scrofulous individuals and in persons who have been affected with intermittent fever. In young persons of good constitution and who submit to a rational treatment, they do not persist so long. In any case, their presence is not to be neglected, for it fixes the standing or at least the period of the disease. Frequently, in fact, sub-cutaneous adenopathies are the only evidences of the period of secondary affections. Later on, they are never met with, or at least are never seen to present themselves with the same characters in the last stage of the disease, for in the tertiary period of syphilis the superficial glands are affected in an entirely different manner.

The changes which the lymphatic glands undergo in scrofula, tuberculosis, and carcinoma are easily distinguished from the foregoing. Scrofulous adenopathies, which are larger, less hard, and less movable, form more compact groups; the same applies to tuberculous adenopathies, which are further distinguished by their seat. As regards cancerous glands, these are only met with in the vicinity of the cancerous affection, and usually do not become generalised; even when they do so, the falling away which they entail cannot leave any doubt as to the diagnosis.†

B. *Secondary syphilitic icterus*.—Paracelsus‡ first and afterwards

* *Revue méd. chirurg. de Paris*, t. 14, p. 176, 1853.

† Like most of the organs, the tonsils present, in the disease which we are studying, two forms of change. One, which is the more frequent, supervenes at the commencement of the secondary period, a short time after the generalisation of the adenopathies and at the same time as the first outbreak of eruptions. The hypertrophied tonsils approach each other and cause more or less difficulty of swallowing. This hypertrophy ally diminishes in proportion as the redness of the pharynx disappears. The other form shows itself later; the lesions which accompany the character of gummy tumours.

Chirurg. Tract., iii. c. 1. p. 146; and Gruner, *Aphrodisiacus*, p. 134.

Garnier,* Astruc, Fabre, Swediaur, Percy and Portal did not hesitate to admit the existence of an icterus of syphilitic origin. The last of these authors,† appealing to observations made in his own practice, went even so far as to acknowledge that the icterus which, in some cases, shows itself as soon as the venereal disease has been contracted, supervenes, at other times, long after the appearance of the primary syphilitic lesions.

More recently, Ricord has given two cases of icterus coincident with the first manifestations of syphilis; but these facts had remained a dead letter when, in 1853, Gubler ‡ sought to prove, by strict observations, that the icterus in question is a symptom connected with constitutional syphilis, *i.e.*, that it has for its cause venereal infection. Since that time, two of the disciples of Gubler, Luton§ and A. Foville,|| have furnished several facts in support of the views of their master, and since then fresh observations have been made tending to confirm the proposition that the icterus contemporary with syphilitic exanthema is a manifestation of the diathetic condition. Despite these facts, doubt still exists in some minds. However, one point which cannot be denied is, the relatively frequent appearance of a form of icterus peculiar to the commencement of the secondary period of syphilis. I have, myself, observed this symptom three times, and my former colleague, Dr. Martel, has seen several cases of the same kind in women affected with syphilis. The fear of rendering this work too voluminous not permitting me to record at length these various facts, I shall abridge them as much as possible.

Indurated chancre, roseola and icterus.

ONS. XII.—V., a painter of flowers, æt. 19, entered the Hospital La Pitié, April 17th, 1860.

Of a lymphatic constitution, but otherwise healthy, this young man was not a spirit drinker; he stated that he had previously had gonor-

* *Nouv. formul. lat. et franç. de l'Hôtel-Dieu de Lyon, avec traité de la vérole*, 1716.

† *Obscr. sur le traitement et la nature des maladies du foie*. Paris, 1813.

‡ *Mémoire sur l'ictère qui accompagne quelquefois les éruptions syphilitiques précoces* (*Gaz. méd. de Paris*, pp. 186, 214, 255, 278, 1854); and *Mém. de la Soc. de Biologie*, 1^{re} série, t. v. 1853, p. 235.

§ *Monit. des Hôpitaux*, 1856, No. 106. *Ibid.*, 1857, Nos. 60 et 68.

|| *Gazette hebdomadaire*, 1858, No. 24.

rhœa: two months ago he had an indurated chancre, and five or six weeks later there appeared a roseola which, at the end of four or five days, was accompanied by jaundice; at the same time there was general uneasiness, lassitude, cephalalgia with fever, and pains in the muscles and joints. The appetite failed and a diarrhœa set in which lasted a fortnight: vague and irregular rigors manifested themselves towards evening. Van Swieten's drops were given fourteen days after the appearance of the jaundice, but the patient continued his occupations and did not follow any further treatment.

On the 17th of April, the skin everywhere presented a yellow, slightly greenish tinge. There existed in the region of the liver a spontaneous intermittent pain which was augmented by percussion. The liver was large and its lower border, which was thick, projected beyond the edge of the ribs. There was no appreciable protuberance on this organ. The appetite almost null, the diarrhœa stopped: there remain some traces of roseola and of mucous patches at the anus.—Ordered a tablespoonful of Van Swieten's solution every morning.

Nothing particular occurred during the next few days. About twelve days later the jaundiced tinge had diminished sensibly. On the 9th of May, when the patient went out, the conjunctivæ were still slightly yellow and the skin had not quite regained its normal colour, but the liver had decreased in volume, the abdomen was no longer tympanitic, the uneasiness and lassitude had ceased.

In the first days of the month of August, I saw this patient again. There was no longer any trace of jaundice and the liver was of almost normal size. For some time he had observed the appearance of fresh mucous patches. I ordered him Sédillot's pills, and from that moment lost sight of him.

Chancre, papulo-lenticular syphilide, angina, secondary icterus.

Obs. XIII.—D., laundress, æt. 18, entered the Lourcine Hospital April 10th, 1860.

Well-formed in appearance, this young woman had prolonged ophthalmia when four years old, and since that time confluent small-pox and typhoid fever. She began to menstruate at fifteen, and had a miscarriage five months ago. Six weeks before admission, some time after having felt pain on making water, and after observing a pimple upon one of the labia, she was attacked by sore-throat and soon observed an eruption, which spread rapidly over the whole cutaneous surface. At the same time she was seized with lassitude, general uneasiness, cephalalgia and fever.

On the 11th of April, there was a look of fatigue, and papulo-lenticular on the whole body and even on the face, with slight desquamation of the chin. Alopecia, posterior cervical adenitis; erythematous of the throat; tonsils swelled and rather greyish; mucous in the lobe of the left ear. There was also deep-seated pain at part of the left thigh, below the crural fold and in the latter

hard inguinal glands resembling a string of beads; ulceration of the left labium.

April 14th.—Slight yellowness, especially marked in the conjunctivæ and skin of the face.

April 15th.—Icteric tinge well marked.

April 16th.—The urine, tested with nitric acid, showed the presence of bile.

April 17th.—Jaundice gradually more and more distinct and general; great thirst, appetite almost null, but without nausea or vomiting.—The liver projects nearly two fingers' breadth beyond the false ribs. Absence of pain on percussion of that organ. Eruption still very distinct. Ordered a pill of proto-iodide of mercury and two glasses of Vichy water.

April 19th.—The ulcerations and mucous patches have assumed a yellow colour.

April 25th.—Patient complains of her gums. She was ordered pills with chlorate of potash.

April 26th.—Jaundice less marked, eruption paling.

May 1st.—Jaundice completely disappeared.—The ulcers upon the labia majora cicatrised.

May 4th.—Diarrhœa, colic. Treatment stopped.

May 7th.—Redness and swelling of the gums.—Diarrhœa suppressed. Treatment renewed.

The patient afterwards went out entirely cured. (Dr. Martel.)

In another patient, æt. 21, whose case was also communicated to me by my colleague, Dr. Martel, there supervened, shortly after the disappearance of an indurated chancre with multiple adenopathies, first mucous patches and then jaundice accompanied by erythematous angina and gastric disturbance, all without any appreciable producing cause. Two other individuals, the one twenty-three, the other twenty-six years of age, presented the following symptoms: indurated chancre and adenopathies, mucous patches, roseola and icterus, at the same time with cephalalgia, pains in the epigastrium, loss of appetite, nausea, and vomiting. In one case only, the liver appeared to me to be enlarged in volume. Biermer* observed a very similar case:—A young woman, æt. 28, contracted a chancre at the os uteri and was attacked soon after by icterus and roseola. The liver and spleen appeared distinctly indurated and enlarged.

Joined to the cases related by the above authors, these facts give a total of twenty-one cases in which the appearance of jaundice was observed at the commencement of the secondary period, or during

* *Schweizerische Zeitschrift für Heilkunde*, 1863.

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founded chiefly on analogy. We ask ourselves, however, whether secondary syphilitic icterus is not sometimes also the result of the compression of the biliary ducts by the lymphatic glands tumefied and changed in the same manner as the sub-cutaneous glands. When we come to treat of tertiary syphilis, we shall see this process illustrated by post-mortem examinations.

The enlargement of the liver and the febrile disturbance might well suggest the idea of an attack of hepatitis, but neither of these phenomena is constant; the febrile condition is not subordinate to the existence of the icterus, it is dependent upon the general disease. As regards the hypothesis which would attribute the change in the liver to an inflammation propagated from the intestinal mucous membrane to the mucous membrane of the biliary ducts, it appears quite untenable, seeing that the gastric disturbances do not always precede the hepatic affection, and that diarrhoea is a comparatively rare phenomenon. On the other hand, there being nothing to show the effect of moral causes, we must make up our minds to accept one or other of the two theories propounded above, and perhaps both of them.

The icterus of which we have just been speaking is not the only affection of this kind which has been brought into connection with syphilis. Without speaking here of the icterus symptomatic of tertiary changes in the liver, we may remark that, according to certain authors, *icterus gravis* or *typhoideus* may also have a syphilitic origin. However, the facts brought forward in support of this view are neither sufficiently complete nor sufficiently detailed to be conclusive.* On the one hand, we do not find in them either the concatenation or the filiation necessary to establish a causal relation between that affection and syphilis. On the other hand, the change pointed out in them is too different from those which generally appertain to syphilis to allow of their being linked together. Persons under the influence of syphilis are evidently liable to contract a severe form of jaundice, but which is not, on that account, necessarily syphilitic. We cannot, therefore, share the opinion of Lebert,† who admits several kinds of severe jaundice of which he believes one, at least, to be of syphilitic origin.

* See Blachez, *De l'ictère grave*. Thèse de concours d'agrégation. Paris, 1860, p. 62. Faligan, Thèse de doctorat. Paris, 1863, p. 57.

† Virchow's *Archiv für pathologische Anatomie*, 1855.

B. AFFECTIONS OF THE MUSCLES, BONES, AND JOINTS.—LESIONS OF THE EPIDIDYMES AND TESTICLES.

(a) The *muscles*, apart from the pains which have already been mentioned, may, in the course of the eruptions described above, be affected by transient phenomena, such as contraction or retraction. These symptoms are comparatively rare and, for that reason, we shall reserve our description of them until we have to speak of gummy tumours of the muscles.

(b) The *bones* do not always escape the attacks of secondary syphilis. Those which are superficial, such as the tibiæ, the clavicles, the bones of the skull, are the most liable to them. They are affected with pains usually violent, supportable during the day, sometimes intolerable in the night, and especially from nine P.M. to four or five A.M., a period in which they cause insomnia and disturb the patient's rest. Differing little, as regards their characters, from the pains of the period which follows, these exist without its being always possible to connect them with a material lesion of the bone. We do not mean, however, to assert that no change in the bones takes place, for, in presence of the concomitant modifications of the cutaneous or mucous systems, there is every reason to believe that these organs are not, then, always intact. Bassereau,* moreover, has seen a periostosis form under circumstances similar to those under which we have twice had the opportunity of observing periostitis. The subjects in question were young and in the period of exanthematous syphilides; there appeared in them, at the same time with a slight tumefaction of the antero-superior surface of the tibiæ, a diffuse redness accompanied by spontaneous pains which were aggravated by pressure. Mercurial treatment soon checked these symptoms, whose course, moreover, was more rapid than that observed in the affections which appear later. Thus, transient modifications of the bony tissue, superficial and slight periostites, which leave behind no appreciable trace of their passage; such are, in short, the disorders which the osseous system presents during the course of the period of secondary eruption. The same anatomical differences which separate the superficial syphilides from the deep-seated syphilides also distinguish, then, the secondary osseous lesions from the tertiary

* See observation, p. 395 of his work.

lesions; these same differences are met with again between the arthropathies of the second and third period, and this circumstance has appeared to us sufficiently important to induce us to give a separate description of the latter manifestations.

(c) *Secondary arthropathies*.—Several authors, posterior or even anterior to Astruc, were quite aware that syphilis may sometimes manifest its effects in certain of the joints, but not one of them, so far as I know, was of opinion that there might be some difference in the articular affection according as it coexisted with secondary or tertiary symptoms. Neither did Astruc perceive this difference, which Babington was one of the first to recognise.

"There present themselves from time to time, although rarely," says that author,* "cases in which inflammation of the synovial membrane of the joints manifests itself coincidently with secondary symptoms of no doubtful character, becomes more intense during the development of these symptoms, and ceases as soon as the cutaneous eruption or the affection of the throat has been successfully combated by mercury. In cases of this kind, the synovial inflammation presents itself in an acute form and is accompanied by very intense pain, tension, and superficial redness, which suffice to distinguish it from the slow and asthenic form of the same affection which is frequently observed in cases of general cachexia." Quite recently,† we have been led, by personal observations, to admit the same distinction. Two fresh cases, observed by us since that time, have furnished us, on that point, with the elements of an absolute conviction. Here are these cases, which possess an eloquence surpassing all reasoning.

Chancre, mucous patches and roseola, arthropathies, pregnancy.

ONS. XIV.—B., sempstress, æt. 26, entered the Hôtel-Dieu Hospital July 10th, 1864. This girl had been four years in Paris, she was perfectly well-formed, and had not previously had any disease; her parents were also healthy.

She was about five months gone in pregnancy, having menstruated for the last time February 20th. Two months after the last menstrual period, she had at the anus first a *single pimple*, then another, both of which attained a considerable size. Up to that time, she had never had any-

* Hunter, *Complete Works*, transl. by Richelot, p. 651. Paris, 1840.

† Lancereaux, Memoir communicated to the Surg. Society, September 1863.

thing abnormal about the vulva, and asserted that she had never had intercourse but with one individual. July 11th, in the morning, she observed an eruption consisting of erythematous spots. She consulted a doctor, who ordered her some pills.—Lastly, July 16th, she entered the Hôtel-Dieu.

The following day, she stated that since June 9th she felt fatigue and lassitude. She could not sit still. She felt pains in the legs. "My arms feel," she said, "as if I had been beaten." Despite this general disturbance, no cephalalgia, but two mucous patches on each side of the labia majora; mucous tubercles at the external portion of the crural folds and at the anus; nothing in the throat; on the whole abdominal parietes, numerous spots, slightly prominent, of a rather coppery yellow colour, of the size of a twenty-centimes piece or somewhat smaller; scarcely any spots on the legs, but some on the fore-arms.—Absence of adenopathies; some days later, swelling of a single gland at the root of the hair near the insertion of the trapezius muscle. Pains in many of the joints: *to take two of Dupuytren's pills.*

July 27th.—The pains in the bones and joints have not undergone any appreciable modification; the knees, the tibio-tarsal articulations, the elbows, the joints of the fingers, and the sternum are swelled and painful. The skin which covers them is red at some points, motion is painful, and the patient finds herself quite unable to walk; the pain, however, is less severe than in the generality of rheumatic affections.—The eruption continues, the mucous patches are becoming modified. Several of the inguinal glands are swelled.—There is no fever.

From the 28th to the 30th, no change in the state of the joints. Osteocopic pains more severe by night than by day. Stiffness of the legs and joints.—Insomnia.

From July 30th to August 3rd, slight amelioration as regards the mucous patches.—Distinct effusion into the knee-joints, with slight redness of the skin around them.

August 4th.—Eruption becoming paler.

August 6th.—Compression applied to the knees by means of strips of India-rubber. Two days later, the pains had greatly diminished; on the 9th, they were scarcely felt, and that as well in the knees as in the other joints.

Dating from this time, the mucous patches being already partly cicatrised, the rubeoloid eruption disappeared from day to day, the joints, much diminished in size, were scarcely painful when moved, and the patient went out by her own wish, August 15th, almost free from the symptoms she had presented, and without having ceased to take every day two of Dupuytren's pills.

Indurated chancre, erythematous and papular syphilide, two fresh chancres, of which one is phagedænic, recurrence of roseola, fever and syphilitic arthropathies.

Obs. XV.—On the 24th of July, 1863, J. X., a medical student, con-

tracted an indurated chancre on the corona glandis, from a woman in whom he soon after observed inguinal adenitis.

About two months after, inguinal adenopathies, erythematous and papular syphilides, the latter situated chiefly in the palms of the hands, multiple mucous patches, especially numerous at the anus. Ordered Dupuytren's pills for a month and sulphur baths.

In February, 1864, a fresh chancre, which Cullerier declared to be an indurated sore, but which healed in ten days; the patient had, at the same time, mucous patches in the mouth. The mercurial treatment was continued.

In July, 1864, phagedænic chancre, soon followed by suppurating buboes which did not yield to an abortive treatment (blisters and painting with tincture of iodine), and which required to be opened with a bistoury; suppuration long continued and cicatrisation slow in spite of great attention.

In November, 1864, after excesses in drinking and with women, appearance of roseola which lasted at least three weeks.—In the course of January, 1865, uneasiness, lassitude, fever at times, slight bronchitis and laryngitis, at the same time that pains occurred which settled in both wrists. These soon became the seat of considerable swelling and were covered with a disseminated redness in the form of spots. The pains were more violent at night and on motion. The patient said the sensation was like that of *being broken*. Ordered, proto-iodide of mercury. A fortnight of this treatment caused the lesions in the joints to disappear, but they returned in six weeks and settled in the upper limbs and chiefly in the wrists; this time they were more violent, but the swelling less; the redness at the joints still showed itself in the form of spots.

This second outbreak in the joints had lasted five or six days, when the patient, put upon the use of iodide of potassium to the extent of fifteen grains daily, became cured after taking that medicine four days. In April, no lesion existed and his general health was good.

To these two observations we might add a case communicated by our learned friend Dr. Charcot, and another to be found in our report to the Surgical Society. These cases—in which the lesion of the joints, always concomitant to secondary syphilitic eruptions, had a peculiar evolution—leave, we think, no doubt of the causal relation which connects with syphilis the pathological derangements in question; and the proof of this is that these manifestations in the joints, to which a rheumatic origin might have been attributed, did not yield until, their true nature having been recognised, recourse was had to antisyphilitic treatment.

The symptoms peculiar to the arthropathies of secondary syphilis closely resemble those of rheumatism. In both diseases, the joints are the seat of swelling, redness, and pain; but, in the case of

syphilis, the swelling of the joints is, in general, inconsiderable and the redness less extensive. The pain, which the patients readily compare to a sensation of breaking or tearing, is subject to nocturnal exacerbations, but not much increased by motion. The knees, the wrists, the elbows, the joints of the fingers were separately or simultaneously damaged in the cases we have considered. Once only there was serous effusion into one of the femoro-tibial articulations. Rarely was a single joint only affected, and this circumstance will not surprise anyone who knows that the generalisation of the pathological conditions is the peculiarity of syphilis at that period of its existence. In any case, if secondary arthropathies, like rheumatic arthropathies, are multiple, it should be said that they do not enjoy the mobility of the latter, and that their duration is generally less, except when a specific treatment is employed. The fever, moreover, is less intense in the case of localisations of syphilis in the joints, which are thereby distinguished from the rheumatic manifestations, as also by their coexistence with adenopathies and with eruptions differing from those of rheumatism.

The prognosis of secondary syphilitic arthropathies is comparatively favourable, inasmuch as these affections, attacking only the most superficial of the articular surfaces, do not leave behind them any consecutive injury in the joints.

(d) *Secondary orchopathies.*—The *testicles* may, like the muscles and the bones, undergo the influence of secondary syphilis. In fact, the syphilitic affections of these organs sometimes accompany or closely follow the exanthematous eruptions, sometimes appear at a more remote period. The morbid change is probably not altogether identical in the two cases; but, hitherto, no case, so far as we know at least, has afforded an opportunity for studying the anatomical modifications which constitute the secondary affection of the testicle. This affection, in any case, occupies by preference the epididymis, while, later on, it is the gland itself which is almost exclusively attacked. Bassereau has once seen epididymitis coincide with an erythematous syphilide. In five cases observed by Dron, the swelling of the epididymis appeared at the earliest two months after the chancre, at the latest five months, the average being three months and a half. Thus the existence of secondary manifestations in the testicle cannot be doubted; but since these manifestations are much more rare than those which supervene at a more advanced period, we propose to complete the study of them when speaking of the latter.

C. AFFECTIONS OF THE NERVES.

Neuralgias, and by this word we understand fixed pains and not the vague and erratic pains of which we have been speaking—are not absolutely rare in the course of the secondary period. The encephalic nerves are very especially predisposed thereto; and thus neuralgias of the forehead and of the head are the most common, although the other nerves are not always exempt from this affection. In any case, these neuralgias have no specific character; they frequently coexist with obstinate headache, and are sometimes intermittent, or even periodical. The antecedents of the patient and the syphilitic symptoms which accompany them enable us to attribute them to their true cause and to combat them by appropriate treatment.

Like the cutaneous, ganglionic, and articular manifestations, syphilitic neuralgias are multiple and little tenacious in the secondary period; fixed and usually localised in a single branch in the tertiary period. Very common in the face at the commencement and during the course of the eruptive period, they offer the peculiarity of occupying generally both sides, and of occurring at the same time in the forehead and occiput, so that the important characteristic of being double may be attributed to them.

This character exists in the following case:—A young woman, æt. 25, had never observed anything abnormal upon the genital organs. Sept. 18th, 1866, she felt towards evening pains in the eyes and forehead which she compared to stabs with a pen-knife, with insomnia at night. The pains continued by day, but were less violent. Each evening, about seven P.M., fresh paroxysms. On admission into the Hôtel-Dieu Sept. 26th, she presented a very well-marked syphilitic roseola. She had severe pains in the supra-orbital, frontal, and sub-occipital regions on both sides, buzzing in the ears, insomnia, and slight lassitude. "Every evening," said this patient, "I feel as if cut with a razor in the neighbourhood of the temples and towards the vertex, and similar pains in the eyelids and forehead." These symptoms yielded in a few days to iodide of potassium. Mercury also relieved them, but less rapidly.

(For secondary cerebral affections, consult: Aug. Berger, *Zur Casuistik der Gehirnaffectionen bei secundärer Syphilis. Inaugural Abhandlung.*)

At this period of syphilis, paralyses are not frequent, those at least which are connected with a material lesion of the nervous

centres. Amongst the numerous observations contained in this work upon syphilitic affections of the nerves, there is only one case of secondary syphilitic hemiplegia, and even that presented no appreciable cerebral lesion. This case was that of a young man affected with syphilitic impetigo, six months after the appearance of a chancre, and who, almost suddenly, was seized with hemiplegia of the right side. The autopsy did not reveal any lesion appreciable to the naked eye, and no microscopic examination was made.* Our learned colleague, Dr. E. Vidal, had an opportunity of observing a rather similar case. The hemiplegia supervened shortly after the disappearance of roseola; the recovery was not quite perfect. Dr. Kuh has quite recently given a case† worth adding to the preceding. A woman, 47 years of age, observed, four or five weeks after the appearance of a discharge from the genitals, a papulo-squamous syphilide with adenopathy and alopecia. A fortnight later, she had cephalalgia, pains in the right eye with impaired vision on the same side, and weakness of the lower extremities. On examining this patient a few days afterwards, there were found, besides the above symptoms, iritis and condylomata about the labia. The weakness of the left lower extremity soon became changed into complete paralysis, which occurred with dropping of the right eyelid after a convulsive seizure. In consequence of the administration of iodide of potassium a slight amelioration showed itself, but fresh convulsive attacks brought on apathy, somnolence, stertor, and finally death. The autopsy showed infiltration of the meninges of the convex surface of the brain with a yellow exudation, which was found also in the form of small masses in the substance of the hemispheres. Such are, so far as we know, the facts known concerning secondary lesions of the brain; now that we have pointed out these facts, we shall not attempt to comment upon them. They are too little numerous, in fact, to authorise us to admit with certainty the existence of secondary syphilitic manifestations within the sphere of the encephalon.

A like *reserv* cannot be practised with regard to certain local paralyses, which affect especially the encephalic nerves which traverse the bony canals of the base of the cranium. Under these circumstances, however, it may be asked whether the paralysis is not rather the effect of a change in the fibro-osseous canal than in the nerve

* Obs. XLVI. p. 173.

† *Prager Med. Wochenschrift*, 23, 1864; and Schmidt's *Jahrb.*, Vol. CXXV. p. 312.

itself, whether there is simply a question of an indirect paralysis? The very seat of these paralyses appears, to a certain extent, to justify this view.

Bassereau* saw two cases of facial hemiplegia occur soon after the outbreak of an erythematous syphilide. Davaine† has seen this affection supervene a month after the primary lesion. Several rather similar cases were furnished by ourselves in a work of earlier date.‡ Since then, two fresh cases§ have been published in which, as in the preceding cases, the facial hemiplegia showed itself after an exanthematous syphilide. Lastly, another case of the same kind has come to our knowledge, which was communicated to the Medical Society of the second district by Dr. Lefevre. In all these cases, the facial hemiplegia, which generally came on suddenly, was not quite complete, the orbicularis palpebrarum was touched, however, and electric excitability diminished. The anamnestic or concomitant symptoms alone served to form the diagnosis, as there was no special symptom present to reveal the origin of the affection.

The prognosis of secondary syphilitic paralyses is not very unfavourable, even if we overlook their connection with syphilis; but the knowledge of this connection admits of our expediting the course of the disease and obtaining a more rapid cure.

In the study which we have made of the syphilitic exanthemata, we have said a few words concerning the chief secondary manifestations in the organs of smell and hearing. We shall not have to revert to this subject but, to complete our study of secondary lesions, we must point out the frequent and only too often serious affections of the various membranes of the eye.

AFFECTIONS OF THE ORGANS OF THE SENSES.—SYPHILITIC OPHTHALMIAS.

Al. Trajan Petronius, De aurium atque oculorum læsione, in Aphrodisiaco, p. 1337. De morbo gallico, lib. vii. cap. viii. *Dupré*, Des affections syphilitiques de l'œil. Thèse de Paris, 1857. *Mackenzie*, Traité pratique des maladies de l'œil. Paris, 1857. *Denouvilliers et Gosselin*, Compendium de chirurgie pratique. Paris, 1855. *Desmarres*, Traité des mala-

* *Traité des affect. de la peau sympt. de la syphilis*, p. 76.

† *Comptes rendus de la Société de biologie*, t. iv. p. 169, 1852.

‡ See Léon Gros and Hancereaux, *Des affect. nerv. syphilitiques*, Observ. LXVIII., LXIX., CCLVIII., CCLIX., CCLX., and CCLXI.

§ Langlebert, *Gaz. des hôpitaux*, p. 473; Babuaud d'Angers, même journal, p. 582, 1863.

dies des yeux. Paris, 1859. *Sichel*, Sur les différentes formes de l'amaurose, et spécialement de l'amaurose syphilitique, *Gaz. méd.*, pp. 28 et 29. Paris, 1859. *C. Stellwag von Carion*, Lehrbuch der praktischen Augenheilkunde. Wien, 1861. *Wharton Jones*, Practical treatise on diseases of the eye. *Deval*, Amaurose syphilitique, utilité de l'ophthalmoscope, *Union méd.*, t. iii. p. 307, 1859. *H. Taylor*, On certain syphilitic affections of the eye, *British Med. Journ.*, 1862. Analysis in *Gaz Méd.*, p. 424, 1863. *Meilhac*, De l'amaurose syphilitique. Thèse de Paris, 1863. *Cocci*, Sur l'amaurose syphilitique, *Gaz. Méd. Lombarda italiana*, 1864, No. 10.

In the first years of the present century, Travers and Lawrence in England, Beer* in Germany, and Sichel† in France studied the syphilitic lesions of the eyelids and iris. It was the ophthalmoscope which enabled us to discover the lesions of the choroid; for Graefe, Desmarres, and Follin was especially reserved the honour of describing them well.

Of all the manifestations of syphilis, the affections of the eyes are perhaps those which it is the most difficult to classify. They sometimes accompany the exanthematous syphilides; sometimes, more tardy in their appearance, they constitute, so to speak, a transition period between secondary and tertiary affections. In general, they invade the eye from its anterior to its posterior part, and are the more circumscribed and more serious in proportion as the period at which they supervene is further removed from the first appearance of the primary lesion. In reality, no membrane of the eye is exempt from the attacks of syphilis. The iris and the choroid are the most liable, and as, after all, the morbid localisation is most frequently limited to one or other of those membranes, it follows that we are called to study in succession the changes peculiar to each of them.

SYPHILITIC IRITIS.

Lawrence, On the venereal diseases of the eye. London, 1830. *Fel-peau*, Dict. en 30 vol., art. Iritis. *Ammon*, Iritis séreuse, &c. *Annales de la chirurgie franç. et étrangère*, 1844, t. x. *Jacob*, Treatise on the inflammation of the eyeball. Dublin, 1849. *Ricord*, De l'iritis syphilitique; *Annales d'oculistique*, t. xxxvi. *Ch. Deval*, Des affections vénériennes de l'œil, *Gaz. méd.*, p. 2, 1848. *Tavignot*, *Gaz. des hôp.*, 1848.

* Beer, *Lohre von den Augenkrankheiten*. Wien, 1813-1815.

† Sichel, *Gaz. des hôpitaux*, 1833, No. 32; *Traité de l'ophtalmie*, &c., 1837, p. 426-456; *Journal des connaissances médicales pratiques*, déc. 1840, p. 65 et suiv., janv. 1841, p. 97 et suiv.; *Iconographie ophthalmologique*. Paris. 1853, p. 120.

Sketched by Beer, Dalrymple and Sichel, syphilitic iritis has been described, as regards its symptoms, by Lawrence, Desmarres, Mackenzie, Wharton Jones and most modern ophthalmologists. One of the authors who have most carefully studied it in an anatomical point of view, Virchow, recognises a superficial iritis (*peri-iritis*, *iritis serosa*) and a deep-seated iritis (*iritis parenchymatosa*), of which the one causes synechia and atresia, while the other occasions cicatrices, thickenings and retractions. The same author inclines also to admit a gummy iritis, so that there would be met with in the iris all the anatomical forms which will be pointed out further on in the liver, the testicles, and the principal viscera. In fact, the syphilitic changes in the iris do not always present the same characters: some, more superficial and also more extensive, invade the whole membrane of the iris; others, more tardy in their appearance, more deep-seated, and more circumscribed, scarcely pass, in certain cases, the limits of the ciliary circle. When they have their seat in the iris, it is in the thickness of the iris itself that they are developed, to attain their completion on its surface; but we rarely have an opportunity of examining those lesions of syphilitic iritis which certain authors have compared to gummy deposits. However, A. Graefe and Tolberg,* having extirpated a syphilitic tumour of the iris which threatened to destroy the eye by suppuration, found that this tumour presented, on examination with the microscope, all the characters assigned by Virchow to gummy tumours in an early stage. This case, which shows that the iris may become the seat of deposits analogous to the gummy deposits, explains beyond doubt the existence of those pretended abscesses of syphilitic iritis which are probably nothing else than gummy tubercles in the last stage. The latter, moreover, known to Beer under the denomination of condylomata, may burst into the anterior chamber, and become the starting-point of a hypopyon, or even, but more rarely, make their way outwardly, after having perforated the cornea, as occurs in the case of gummy tumours of the testicle, which sometimes even destroy the tunica vaginalis.

Syphilitic iritis has a slow, uncertain and often insidious commencement. Of its symptoms, some are objective, others subjective.

Objective symptoms.—When the affection is well-marked, the eye

* *Archiv für ophthalmolog.*, t. viii. part 1. 288-296.

is red in consequence of the injection of the vessels; the iris, dull at first, gradually assumes a dirty, greyish, dark colour, which does not admit of seeing as distinctly as usual the beautiful arrangement of its fibres. Sometimes there are even seen on its surface small, isolated elevations, of a brownish red colour, and which Ricord and Nyman compared to syphilitic papules, but which consist exclusively, perhaps, of extravasations of blood. The margin and afterwards the free edge are attacked successively. Uneven, irregular, and more or less altered in form, this latter presents a bluish red or rusty tinge, which afterwards passes into yellow.

Such is the iritis contemporary with the syphilitic exanthemata. In more tardy iritis, we may chance to observe, besides these changes, swelling and discoloration of one or several points of the iris, next the small whitish tumours mentioned above, and lastly the inflammation of the eye which may be the consequence thereof. The aqueous humour then accumulates in the chambers of the eye, sometimes the cornea is even seen to become opaque and to present small brown points, and the symptoms of punctuated keratitis are observed. Under these various circumstances, the movements of the iris are slow, difficult, or even impossible under the influence of excitants, the pupil is more or less contracted, angular, and drawn upwards or downwards; its retracted edge is sometimes adherent to the capsule of the lens.

Subjective symptoms.—One of the first symptoms, pain, slight at first, soon becomes more severe, and is felt not only in the eye, but around the orbit. Continuous, it presents exacerbations during the night, more intense perhaps in the late period. Watering of the eyes and photophobia are rare, but vision is most frequently impaired in proportion to the greater or less obstruction of the pupil. Scintillation exists only when the more deep-seated membranes of the eye are affected simultaneously.

A feeling of general uneasiness and slight febrile condition accompany these symptoms. Both eyes may be attacked at the same time, especially if the iritis be precocious; but, in general, they are invaded one after the other. Under these circumstances, moreover, relapses are not rare.

The course of syphilitic iritis is slow and its duration comparatively long in the absence of any specific treatment. Recovery is the usual termination of early iritis (*iritis serosa*), but it is not always that of late iritis; the latter may leave behind it synechiæ, deformities of

the pupil, and a persistent dimness of sight, besides serious complications of which it may be the origin.

Diagnosis.—The rusty or coppery tinge of the free border of the iris, the more or less angular deformities of the pupillary opening, and, in some cases, the presence of condylomatous or tubercular deposits; such are the indications which may serve for the diagnosis of syphilitic iritis; these indications, however, are not of absolute value unless there exist at the same time symptoms of secondary syphilis, or at least traces of syphilitic infection.

The slow evolution, the deformities or even perforations which sometimes follow the syphilitic deposits of iritis, will serve to distinguish these deposits from the abscesses with which it might be possible to confound them. But it is with rheumatic iritis in particular that syphilitic iritis presents close symptomatic analogies. The following table, which we owe to the complaisance of our distinguished colleague, Dr. A. Desmarres, appears to include as completely as possible the differential indications of these two affections.

SYPHILITIC IRITIS.

No acute symptoms.
Slow development of the disease.
Yellowish green discoloration of the iris, dimness of the cornea and aqueous humour.
Perikeratic circle little distinct.
Synechiæ and pupillary exudations.
Punctuated keratitis in the last period.
Condylomata of iris.
Very little photophobia.
No watering of eyes.
General dulness of eyes.

RHEUMATIC IRITIS.

Always acute symptoms.
Rapid development.
No discoloration of iris, cornea and aqueous humour retain their transparency.
Circle very distinct.
Synechiæ rare.
Never punctuated keratitis.
No condylomata.
Intense photophobia.
Abundant watering of eyes.
Eyes unusually bright.

The prognosis of syphilitic iritis is generally unfavourable. If, when it is precocious and carefully treated, this affection most frequently disappears without leaving any trace, this is not always the case when it is left to itself. Under these circumstances, it may extend to the choroid or the retina, and cause the destruction of the eye. Late syphilitic iritis is a dangerous affection, and may compromise more or less the integrity of the function of vision.

SYPHILITIC CHOROIDITIS.

De Graefe. Affections syphilitiques des yeux. Deutsche Klinik, 1858. No. 21; and Archives génér. de médec. 1859, t. I. p. 347. *A. Schäfer.* De la choroidite syphilitique. Thèse de Paris, 1859. *Bader.* Ophthalmoscopic appearances of secondary syphilis. Ophthalmic Hospital Reports, Vol. I., pp. 243, 251; and Annales d'ophtalmologie, t. xiii. p. 183. *X. Galezowski.* Observations cliniques sur les maladies des yeux. Paris, 1862. *Rich. Liebreich.* Atlas d'ophtalmoscopie. Paris, 1863.

Like iritis, choroiditis is an affection not very unfrequently met with in the course of secondary syphilis. Scarcely studied before the application of the reflecting mirror to the examination of derangements of vision, it has only really become known of late years.

The feeble reaction which accompanies choroiditis contributes to render its outbreak sometimes uncertain; at a later period, it manifests, like iritis, two sets of phenomena, the one subjective, the other objective.

Subjective symptoms.—A slight dimness, a kind of lassitude of the eye, a sensation of painful tension, are the first symptoms which attract the attention of the patient. The loss of power of sight increases gradually, objects appear as in a mist; sometimes, but exceptionally, the patient sees fixed opaque spots or *muscæ volitantes*; there is no scintillation unless the retina be simultaneously affected. The sight, weakened at first, may afterwards become entirely lost. The pain also is liable to become more intense or even to present nocturnal exacerbations.

Objective symptoms.—Much more important are the symptoms furnished by direct and ophthalmoscopic examination. Long veins with a sinuous course are seen upon the conjunctival surface of the sclerotic which, for the most part, like the recti muscles, converge towards the cornea, where they anastomose with each other to form arches with their convexity towards the circumference of the cornea. With this injection, the lacrymal secretion is not modified, the anterior media of the eye are transparent, and the opening of the pupil remains normal, unless there be a concomitant iritis; the power of contraction in the iris is, however, diminished.

With the ophthalmoscope, the vitreous body is seen to be hazy, and grey and white flakes the size of a small pin's-head or in the form of webs are sometimes seen floating in it (Bader). If the eye is seen the optic nerve, not distinct, but as if

through ground glass or a thick fog, veiled as it were with gauze, with confused and, to some extent, effaced outlines. Its yellowish white colour in some cases has led to its being compared to certain appearances of the sun in an atmosphere charged with vapour. The vessels of the choroid, injected from the commencement of the affection (congestive choroiditis), are frequently, later on, diminished in size, and scarcely recognisable. The pigmentary layer may be modified and less opaque (pigmentary maceration). Lastly there are seen, chiefly upon the posterior segment of the choroid, little white patches of exudation, surrounded by a reddish brown ring, slightly prominent at first, and which, according to Graefe, are often perceptible to the patient, in the form of central scotoma. Regarded by some authors as an advanced degree of syphilitic choroiditis, may not these patches rather constitute a special anatomical type? This view appears to us legitimate, for we know that syphilitic manifestations, even in the secondary period, may assume various forms. Some authors admit, moreover, several varieties of syphilitic choroiditis; not only do they recognise a congestive choroiditis and an exudative choroiditis, but to the latter they accord a diffuse form, in which the back of the eye looks as if veiled, and a circumscribed form characterised by small white patches of exudation.

Syphilitic choroiditis develops itself most frequently without iritis, which is easily explained by the independence of each other of the two membranes. It occupies one or both eyes, but the tendency to become duplex appears to be less in proportion as the syphilis is of longer standing, and that no doubt by virtue of the same general law as, we know, governs the cutaneous changes. In some cases, however, the coexistence of iritis and choroiditis may be observed, sometimes in the same eye, sometimes in two different eyes. In 19 cases observed by Galezowsky in Desmarres' clinical wards, there was a concomitant choroiditis six times.

The course of syphilitic choroiditis is usually slow; this affection sometimes lasts for months, in the course of which it may present successive ameliorations and aggravations.

Recovery is the most common termination of this affection, provided it be recognised and treated sufficiently early. The vitreous humour regains its normal transparency, the white patches become effaced, the optic nerve clears itself; there then remains no other trace of the change in the choroid except small disseminated pigmentary spots, which may give to the retina an appearance similar

the eye and the optic nerve. At other times, the more or less marked inflammation of the eye is part, either from a concomitant inflammation of the optic nerve, or a consecutive atrophy of the optic nerve.

The inflammation of the eye in syphilitic choroiditis is easily distinguished from that of the eye in general, with cases of the eye in general, and from any and previous ones. In any case, the inflammation of the eye in syphilitic choroiditis is easily distinguished from that of the eye in general, with cases of the eye in general, and from any and previous ones. In any case, the inflammation of the eye in syphilitic choroiditis is easily distinguished from that of the eye in general, with cases of the eye in general, and from any and previous ones.

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SYPHILITIC ERYTHEMA

The inflammation of the eye in syphilitic choroiditis is easily distinguished from that of the eye in general, with cases of the eye in general, and from any and previous ones. In any case, the inflammation of the eye in syphilitic choroiditis is easily distinguished from that of the eye in general, with cases of the eye in general, and from any and previous ones.

Syphilitic retinitis is not, like iritis and choroiditis, an affection admitted without dispute by all ophthalmologists; some, and amongst these are Graefe and Follin, regard as choroiditis most of the deep-seated affections of the eye which supervene in the course of the secondary period. In addition to disseminated choroiditis, Jacobson admits a syphilitic retinitis which may coexist or alternate with secondary syphilitic eruptions, without having been preceded by iritis or choroiditis. This lesion of the retina yields to an anti-dyscrasic treatment, while it persists indefinitely under a purely antiphlogistic treatment.

Métaxas, Schreiber, and some other authors have given, after Jacobson, cases of secondary syphilitic retinitis; but these cases are few, and it may be asked whether the choroid was not the membrane primarily affected.

However this may be, a new symptom presents itself here, which does not exist in simple choroiditis, viz., a photophobia more or less intense and which often renders difficult an examination with the ophthalmoscope. The patients, moreover, often see luminous rings, spots, *muscæ volitantes*, &c. The exterior of the eye presents nothing peculiar, but the vessels of the retina are injected, and that membrane presents an abnormal colour and a want of transparency, especially manifest in the neighbourhood of the optic nerve, where something resembling œdema is observed (Desmarres). Reddish or pink, the optic nerve has ill-defined outlines, surrounded by a dirty green zone (Schreiber's case). In a case which he relates, Liebreich* describes as follows the change in question:—"The veins which run upwards (in the inverted image) are much dilated and tortuous, while the vessels which run downwards are very small and partially obliterated; there are white, striped patches of dulness on the internal surface of the retina, which exercise so much compression upon a whole bundle of vessels that certain branches are thereby transformed into very fine white lines." Let us add that in this case the choroid was affected.

Syphilitic retinitis has a slow evolution and a comparatively long duration; under the influence of an appropriate treatment, it may terminate favourably; it is, nevertheless, sometimes followed by atrophy of the optic nerve and a persistent weakness of vision.

* *Atlas d'ophtalmoscopie*, pl. x. fig. 2.

The diagnosis of this affection is to be made partly from a knowledge of the antecedents of the patient. Albuminous retinitis might simulate syphilitic retinitis, but the great number of hæmorrhagic points which accompany it and the intensity of the white spots peculiar to it suffice, in general, to prevent a mistake prejudicial to the patient.

CHAPTER IV.

PERIOD OF GUMMY PRODUCTS, OTHERWISE CALLED TERTIARY AND QUATERNARY AFFECTIONS.

General characters of these affections.—The name which I adopt here is not only in accordance with the designations which precede; it has further, in my opinion, the advantage of conveying an idea of the material change which, henceforth, will exercise a fatal influence over the whole pathological picture. The great dissemination of the morbid effects had suggested to me the notion of calling this last phase by the name of the period of *Constitutional Affections*. Having reached this point, after a halt of greater or less duration, syphilis, stripped of the chief attributes of virulent diseases, is no doubt a constitutional disease in the sense in which Hunter employed the term, that is to say, a disease in which all parts of the body may be affected in one and the same manner. But the anatomical idea connected with the former appellation determined the choice of it.

In the preceding chapter, we saw the morbid localisations of syphilis limited chiefly to the skin, to some of the mucous membranes, and to a small number of the organs. From this time syphilis extends its manifestations beyond those limits, and we find it everywhere where a web of conjunctive tissue exists, that is to say, in all parts of the body. Various organs, having in common only the conjunctive element, become separately or simultaneously the seat of multiple manifestations which always express themselves, apart from certain differences of form, by very analogous, if not identical, lesions:

To the transient superficial changes described in the last chapter succeed lesions of a special nature which do not spare the viscera any more than the integument. It is no longer simple hyperæmias with or without exudation, inflammations slight and of short duration, but profound changes essentially slow in their evolution, and marked by chronic inflammations. Sometimes extensive and disseminated in a single organ, they are rather comparable to the

chronic phlegmasiæ; sometimes more limited and circumscribed, these changes appear in the form of nodules or tubercles, and it is then that the name of Gummy Tumours (*gommes*) is more particularly reserved for them.

These two anatomico-pathological varieties, differing only in form, have the same starting-point and the same structure; they express themselves, at the outset, by the appearance, at the circumference of the minute vessels, of nuclei and cells which, according to a celebrated German school, have their development in the interior of the normal elements or corpuscles of the cellular tissue (cellular proliferation of Virchow). According to E. Wagner,* these elements of new formation affect, in reference to the adjacent tissue, a special and altogether characteristic arrangement, enclosed as they are in cavities more or less spacious, formed of cellular tissue. But while the trabeculæ of this cellular tissue are sometimes very delicate and enclose sometimes a single cell or small number of cells of new formation, at other times there are seen large strips of this same tissue, amongst which are grouped together considerable masses of cells, themselves separated by very fine trabecular prolongations.

Whatever may be the correctness of this view, which, in my opinion, is very doubtful, it is certain that the cellular tissue is the seat of the production of the syphilitic neoplasm. But, if this neoplasm † be disseminated and little abundant, its organic energy may permit of its transformation into tissue analogous to the adjacent tissue, *i.e.*, into cellular tissue. If, on the contrary, this neoplasm is deposited in larger masses, it has of itself a lower vitality and its elements soon undergo a retrograde action, a sort of degeneration, from the centre to the periphery, the last stage of which is atrophy with fatty molecular transformation. The volume, consistence, and colour of these masses are, however, variable. The changes which they undergo also vary in rapidity, whence various differences which Virchow attributes solely to the ground, to the more or less loose texture and vascularity of the tissue in the midst of which these new products develop themselves, but which appear to us to depend also upon the constitution of the individual, his habits of life, and the atmosphere in which he lives.

The two anatomical forms in question may occupy the same organ

* *Archiv. für Heilkunde*, Nos. 1, 2, 3; 1863.

† *Traité des affections nerv. syphilitiques*. Paris, 1861.

at the same time. Their outset is insidious and their presence never causes those febrile or reactionary phenomena which we have frequently observed to precede the evolution of secondary affections. Their evolution is slow, their duration always longer than that of the latter affections; but that which especially distinguishes them is the mode in which they terminate. In short, while the lesions of the secondary period leave no appreciable trace of their passage, the anatomical localisations with which we are now occupied change or destroy more or less completely the organ in which they exist, and most frequently commit irremediable ravages. These are, in the case of a diffused hyperplasm, furrows and depressions more or less deep and in the form of cicatrices, changes which result from a property peculiar to all the new formations of cellular tissue definitively organised, and of which the tissue called cicatricial is the prototype; they are, in the case of gummy products, partial, circumscribed retractions when there is absorption of the product, ulcerations and deep cicatrices when there is softening and elimination. Hence those numerous, characteristic modifications in the external form of the organs, but upon which we cannot dwell now, as we shall have to revert to them when speaking of the viscera separately.

Functional derangements varying according to the organ affected, or even according to the portion of the organ affected, such is the character of the symptomatic evolution of the changes with which we are occupied.

Glandular lesions are not wanting here any more than in the preceding period; but instead of the superficial glands, it is the deep-seated and especially the visceral glands which yield to the attacks of syphilis, for this is above all the visceral period of the disease. For this reason, the patient is not only chloro-anæmic, but soon falls into a state of *cachexia* and *marasmus*.

The affections which show themselves in this new stage rarely coexist with those of the period of general eruption; usually contemporary, they may fairly be said to constitute the last phase of the disease. It appears possible, however, in a certain number of cases at least, to find a kind of progression in their course, and we may then, in accordance with the received views, admit that this latter period attains completion in three phases:—In the first appear deep-seated lesions of the skin (tubercles, rupia);—in the second, changes in the sub-cutaneous cellular tissue, fibrous tissues, tendons, muscles, and bones;—lastly, in the third, supervene affections of

the viscera. All these manifestations usually occur late, not a few months after the syphilitic contamination, but one or several, and sometimes twenty years after the first appearance of the primary lesions, when patient and physician have had ample time to forget them.

One question remains to be elucidated which is not without interest in reference to the difference which exists between the manifestations of this period and those of the preceding period. Is syphilis still inoculable? Vidal has spoken of the inoculation of a syphilitic ecthyma; but on reading the case which he reports in reference to this point, we soon come to the conclusion that the affection in question really belonged to the period of general eruption. Until we have further evidence, it would appear that syphilis is not inoculable in this last stage. Is it hereditary? This is possible; but, in any case, the hereditary transmissibility does not exist with the same degree of force as in the preceding period. (See Hereditary Transmission.)

In opposition to the generality of syphilographers, we place in this last stage of syphilis the deep-seated affections of the tegumentary system, such as deep-seated ecthyma, rupia, &c. The co-existence of these affections with lesions of the bones or viscera is, in fact, too frequent to make it possible to separate the study of them from that of the latter and to place them, as is usually done, in the list of secondary manifestations. The ordinary period of their appearance as well as their anatomical modality sufficiently point out, moreover, that they find their right place here.

ARTICLE I.—EXTERNAL TEGUMENTARY SYSTEM.—TARDY SYPHILITIC DERMOPATHIES OR DEEP-SEATED SYPHILIDES.—LESIONS OF THE SUB-CUTANEOUS CELLULAR TISSUE.

§ 1. Cutaneous lesions.—Deep-seated syphilides.

Circumscribed and generally arranged in groups, deep-seated syphilides present themselves under various aspects; most frequently of a semi-lunar, horseshoe, crescentic, or T shape, they usually have a coppery colour or one resembling that of lean ham. Their structure has been little studied hitherto; it may be said, however, that they have, with the exception of the pustulo-ulcerative syphilide, an anatomical constitution very analogous to, if not identical with, that of the more deep-seated lesions of the sub-cutaneous cellular tissue

and of the viscera; they usually run a slow course and terminate either in resolution, or ulceration, leaving behind them, not a simple discoloration but a true cicatrix, which differs slightly according to the particular mode of termination. This circumstance, conjointly with the absence of premonitory symptoms and the late period at which these affections appear, necessarily indicates a more advanced step in the morbid evolution, and thus the division which we have adopted is justified.

Under these circumstances, the deep-seated syphilides group themselves quite naturally under two heads, according as the elementary lesion has for its starting-point a pustule or a tubercle. There is reason, therefore, for distinguishing:

- A. Pustulo-ulcerative syphilides;
- B. Tubercular syphilides.

A. PUSTULO-ULCERATIVE, BULLOUS, DEEP-SEATED PUSTULAR
SYPHILIDES.

We place in this group several affections which appear contemporaneously with changes in the cellular and fibrous tissues, the bones and muscles, sometimes even with lesions of the viscera, and which, despite a different initial lesion, all finish by ulcerations more or less deep. The crusts, which are often thick, forming upon the surface of these ulcerations, have also obtained for these symptoms the name of Pustulo-crustaceous Syphilides.*

The earlier syphilographers, who described these manifestations under the name of *Pustulæ cum cortice*, recognised several species of them, such as *pustulæ crustosæ*, *corrosivæ*, *pustulæ ostracosæ*, from their resemblance to oyster-shells, &c. Frequent in the last centuries, these eruptions are much less so in the present day, except perhaps in some marshy or damp countries and in certain sea-port towns in which the lowest part of the population is addicted to spirituous liquors.

Eminently subject to epidemic influences, these morbid determinations of syphilis have been observed in most of the epidemics which have existed and in that of the fifteenth century in particular. The generality of the authors of that period applied themselves, in fact, to the description of these ulcers as eroding the flesh and eating

* *Lectures on Scrofula and Syphilis*, published by Lefevre. Paris, 1864, p. 197.

down to the bones. . . . "Exulceratæ inde exedebant, more eorum ulcerum quæ phagedenica appellantur, atque interdum non solum carnes, sed et ossa etiam ipsa inficiebant."* These diseases are at present much more rare and less serious.

Elementary lesions differing slightly as to their external characters are observed at the outset of each of the affections which constitute the group in question; the three following varieties may be distinguished: *impetigo*, *ecthyma*, and *rupia*.

When the pustulo-ulcerative syphilide commences with groups of *impetigo*, a red spot is first seen upon which small pustules develop themselves, the bursting of which is followed by crusts more or less thick and greenish.

Very similar phenomena are observed in cases of deep-seated *ecthyma* and of *rupia*, in which the whole difference consists in the number, extent, and the more or less serous and sanguineous contents of the vesico-pustules which surmount the red spot. However the case may be, the bullæ or pustules soon burst; their contents thicken and form a thick, moist, yellowish or greenish crust, which gradually dries up and assumes a brownish tint. Around this crust occurs a fresh swelling of the skin, then fresh crusts which are added to the preceding ones. Then comes another crop, which behaves with regard to the second as this did towards the first, and so on, so that after a certain time there exists (especially in *rupia*) a kind of imbrication of uneven crusts, most frequently rounded and in form of shells, and surrounded by a livid red ring. Under these crusts thus imbricated exists an irregular ulcer with a greyish floor formed of granulations of small volume often covered by a false membrane. The edges of this ulcer, which are soft and split, are set, as it were, in a frame, in the more or less thick and coloured crusts which attach themselves to them. The sanious and sanguineous suppuration of which they are formed is remarkable for its plasticity and for a great tendency to dry up, which shows that it is not a question here of a simple secretion of pus, but of a different product and one analogous to that of some of the so-called gummy secretions. These crusts present, moreover, according to a celebrated physician of the Hospital St. Louis,† differences which are not devoid of relation to the initial lesion. Thus, in the *ecthymatous* form, the crust is vaulted at its centre, and its edges framed in the

* Fracastor, *loc. cit.*

† Hardy, *Leçons*, &c., p. 198.

thickened, projecting, copper-coloured surrounding skin; in the impetiginous form, the crusts are less prominent, uneven, granular, cracked, and project beyond the ulcerated surface; in rupia, the crusts are blackish, prominent, conical, stratified, resembling oyster-shells; in all these cases, they are surrounded by a coppery red circle.

Instead of always forming circumscribed groups, the elementary lesions in question, especially those which are known under the name of rupia, remain isolated and disseminated to the number of three or four on each limb. There appears first upon the surface of the skin a red spot, soon raised by a serous or purulent secretion. The bulla or pustule thus formed remains flat, and sometimes attains an extent of two or three centimeters. At the end of a few days, a yellowish crust is formed, which ends by becoming brownish or greenish. Uneven, wrinkled, vaulted, or conical, this crust is rounded, and surrounded by a copper-coloured circle. The subjacent ulcer, which is deep and has perpendicular edges, behaves as already stated. The seat of the ulcers varies necessarily with the elementary lesions. It is chiefly on the lower extremities that we see rupia and ecthyma, while the face, the neck, the hairy scalp and the chest are more especially attacked by the impetiginous form. When the termination approaches, the crusts dry up, contract, become loose and fall off, leaving bare a red, mottled surface, which afterwards assumes a coppery yellow colour or becomes covered with scales, and to which succeeds a depressed and whitish cicatrix.

The syphilides which we are now considering run a chronic course and are of long duration. Not only do they supervene at a late period, but it is of importance to remark that they coexist, in general, with a gradual decay of the vital force and a state of cachexia more or less profound, the habitual indication of the simultaneous existence of lesions of the viscera. Relapses are here less frequent than in the preceding period.

The *diagnosis* of these manifestations is based chiefly upon the antecedents of the patients, and upon the dark red discoloration which surrounds the eruption; we must take into account, moreover, the thickness of the crusts and of the white and deep cicatrices which succeed them.

Simple cachectic ecthyma, an affection observed mostly in children and old people, is already thereby distinguished from the pustulo-crustaceous syphilides; but the ulcerations which characterise it

at a certain period are, moreover, less deep and occupy almost exclusively the lower extremities. Pustular scrofulide gives rise to crusts of a black or whitish, but not greenish colour. Scrofulous ulcers have slashed and not perpendicular borders, and the cicatrices which succeed them, instead of being depressed and of a dull white colour, are prominent, irregular, red or mottled at first, and afterwards pink (Hardy). In doubtful cases, the antecedents of the patient and the symptoms which accompany the cutaneous affection will come in aid of the diagnosis.

The development of the pustulo-crustaceous syphilides is, in general, the indication of a feeble and deteriorated constitution. The prognosis of these manifestations is, for the most part, unfavourable; they constitute, in fact, most frequently, a portion of the malignant forms of constitutional syphilis. "I have seen only six patients affected with syphilitic rupia," says Bassereau; "five of these had had, as primary lesion, phagedænic chancre, which might have foretold, even then, the form and the severity of the possible consecutive symptoms. Amongst the five patients of whom I am speaking, two were affected with deep ulcers at the same time as with rupia; a third had soft exostosis of the tibia. Lastly, another had a testicle as big as a hen's-egg and as hard as a stone." There is nothing, even including the deep and indelible cicatrices which follow these manifestations, which does not serve to show the gravity of the prognosis.

B. TUBERCULAR SYPHILIDES.

Under the name of tubercular syphilides we understand solely those small tumours of dark red colour which occupy the thickness of the dermis and sometimes soften, but which, at a certain period, differ from papules by their greater volume only. We place amongst the changes of the sub-cutaneous cellular tissue (sub-cutaneous gummy tumours) those nodules or quasi furuncular nuclei which form in the cellular cones of the dermis, adhere to the skin, perforate it and give passage to a kind of core, after the exit of which an ulcer remains.

The tubercular syphilide already existed in the fifteenth century; but although probably more widely spread at that time than in the present day, it is nevertheless difficult to find in the writings of that period passages which refer with tolerable distinctness to it. Fernel, by Bassereau's account, is perhaps the only author who has clearly

specified its existence in the following phrase :—"Quin etiam per totum corpus emergunt liventes pustulæ, verrucarum speciem representantes."

The chief authors who have made us acquainted with this kind of eruption are, at the commencement of this century, Alibert, and more recently Cazenave.

Very different from the disseminated papulo-tubercular syphilide, which belongs to the early eruptions,* this form, which is always circumscribed, includes two varieties, viz. :—

- 1st. Dry tubercular syphilide ;
- 2nd. Tuberculo-ulcerative syphilide.

1st. *Dry tubercular syphilide*.—It is characterised by hard, solid pimples, of a bright red, mottled, or coppery colour, more or less prominent, and which terminate in resolution, giving rise to indelible cicatrices.

The face, the forehead, the nose and the lips are its favourite seat ; it is met with also on the upper extremities, especially about the deltoid and on the outer part of the fore-arm, on the lower extremities, and chiefly on the inner part of the legs. In certain cases, it occupies several of the above-named regions ; but it is rarely seen to be disseminated over the whole surface of the body. In a patient in whom it coexisted with hemiplegia and other cerebral derangements, we have seen it situated in the popliteal spaces, upon the buttocks and upper extremities. According to Bazin, the soles of the feet and palms of the hands are not always exempt, and if authors have not spoken of tubercles in those regions, it is because they have confounded them with plantar or palmar psoriasis.

The size of a millet-seed at first,† syphilitic tubercles soon attain that of a pea or a nut. They generally affect one of the distributions which we pointed out for pustulo-ulcerative syphilides ; they sometimes take a completely circular form, the eruption then appearing in successive bursts. There appear at a given point one or more tubercles, which break up and leave behind a brownish stain or a cicatrix ; a fresh eruption then appears around the cicatrix left by the first, then a third which behaves in the same manner ; the enlarged circle soon presents at its centre livid stains or cicatrices more

* See *Syphilide papuleuse*.

† Gibert gives the name of *Granular syphilide* to the small tubercles which occupy the alæ of the nostrils.

another point is invaded by a fresh tubercular eruption, identical in its course to that of the tubercles which preceded it, and thus we frequently see lines of thick, brownish or greenish crusts, interrupted here and there by cicatrices or by surfaces bathed in pus.

When cicatrisation takes place, the floor of the ulcers becomes raised and granulates, at the same time that their edges gradually decline. The cicatrices, brownish at first, assume a dead white colour. They are depressed in places and traversed by bridles.

The face, the neighbourhood of the joints, the back, and the shoulders are the parts where the serpiginous form of tubercular syphilide is usually observed.

Perforating tuberculo-ulcerative syphilide.—Like the preceding variety, it consists, in the first instance, of tubercles which soon ulcerate. But it differs from it by the nature of its ulcerations, which, instead of extending superficially gain considerably in depth: a character which has obtained for it the name of perforating syphilide. Two or three indolent tubercles of considerable size, sunk in the skin so as to form only a slight projection, such is the way in which it commences. The summit of these tubercles soon becomes red, softens, and the skin is involved; a very thick, wrinkled, blackish crust is formed, which covers an ulcer superficial at first. Then the sore invades the whole thickness of the tubercle and, continuing its progressive course, destroys all the tissues it encounters, without being arrested either by the cartilages, or the bones (Hardy).

Thick, wrinkled, brownish or greenish crusts thus cover these ulcers, which have rounded, indurated edges, as if they had been cut with a punch, and a greyish, dirty and purulent floor.

Tuberculo-ulcerative syphilide generally occupies the same regions as serpiginous syphilide, but, moreover, *frequently attacks the velum palati, which it perforates.*

Its evolution is slow. There remain, after it has disappeared, deep and depressed cicatrices, which form so many indelible signs of its passage and which may, under certain circumstances, greatly aid in the diagnosis of syphilitic affections of the viscera.

The course of this syphilitic manifestation is essentially progressive. Its duration is always long. Nevertheless, recovery is possible; the ulcer then becomes deterged and assumes the characters of a simple sore.

Tubercular syphilides frequently relapse; they then attack the portions of the integument which had remained intact.

1. The first of these is the fact that the organism is not a simple machine, but a complex system of interacting parts. The second is that the organism is not a static entity, but a dynamic one, constantly changing and adapting to its environment. The third is that the organism is not a passive recipient of external influences, but an active participant in its own development.

2. The second of these is the fact that the organism is not a simple machine, but a complex system of interacting parts. The second is that the organism is not a static entity, but a dynamic one, constantly changing and adapting to its environment. The third is that the organism is not a passive recipient of external influences, but an active participant in its own development.

3. The third of these is the fact that the organism is not a simple machine, but a complex system of interacting parts. The second is that the organism is not a static entity, but a dynamic one, constantly changing and adapting to its environment. The third is that the organism is not a passive recipient of external influences, but an active participant in its own development.

4. The fourth of these is the fact that the organism is not a simple machine, but a complex system of interacting parts. The second is that the organism is not a static entity, but a dynamic one, constantly changing and adapting to its environment. The third is that the organism is not a passive recipient of external influences, but an active participant in its own development.

5. The fifth of these is the fact that the organism is not a simple machine, but a complex system of interacting parts. The second is that the organism is not a static entity, but a dynamic one, constantly changing and adapting to its environment. The third is that the organism is not a passive recipient of external influences, but an active participant in its own development.

6. The sixth of these is the fact that the organism is not a simple machine, but a complex system of interacting parts. The second is that the organism is not a static entity, but a dynamic one, constantly changing and adapting to its environment. The third is that the organism is not a passive recipient of external influences, but an active participant in its own development.

of the severest character; frequently accompanied by a general debilitation, sometimes even by cachexia and marasmus, they may further become complicated by inflammatory or gangrenous symptoms often of a very formidable nature.

TERTIARY ALOPECIA AND ONYXIS.

Alopecia.—Much less frequent than in the period of secondary affections, the falling off of the hair, which is here the usual consequence of a circumscribed change in the hairy scalp, instead of occurring in small patches and becoming generalised, remains localised and persists in the vicinity of the point which is the seat of the anatomical change. When it acknowledges as its pathogenic condition a gummy tumour or a change in the bones of the cranium, alopecia does not behave differently. It may happen, lastly, that this lesion is connected with general decay and syphilitic marasmus, in a word, with cachexia. But then, although generalised, it is still distinguished by its long duration or even by the impossibility of the reproduction of the hair.

Plica Polonica.—Another change in the hair which some authors have sought to connect with syphilis is *plica polonica*. It is in vain, however, that several physicians, amongst whom must be quoted E. Rudius,* Hercules Saxonia,† R. Fonseca,‡ and Wolfram,§ have believed that they saw, in this affection, the symptom of a masked or even degenerated venereal affection. Nothing authorises the acceptance of this explanation, and hitherto we cannot infer that plica is an effect of the syphilitic poison, since in Poland, as Astruc very justly remarks, many persons are seen affected with plica who cannot be suspected of syphilis, while in many other parts of Europe in which syphilis commits the worst ravages, no one is found to be the subject of plica.||

* *Traité de la verole*, liv. i. chap. viii. et liv. ii. chap. iii.

† *De plica polonica*, in 4°. Patav., 1600.

‡ *Consult. de plica polonica*. Append. Ad. consultat. medic. Venetiis 1618. Francfort, 1625, in 8°.

§ *Versuch über die höchstwahrscheinlichen Ursachen und Entstehung des Weichselzopfs*. Breslau, 1804. Compare: Minadous (J. H.), *Tractatus de corporis humani turpitudinibus*, in fol. Patav., 1600. *De morbo cirrorum sive Helotide*, &c. Patav., 1680. F. L. Lafontaine, *Traité de la plique polonoise*. Paris, 1808, avec Bibliographie.

|| It appears to me unnecessary to make any further attempt to prove that there is no relation between syphilis and plica polonica. Some

Onyxis.—When the changes peculiar to deep-seated syphilides occupy the matrix of the nail, there results a derangement of the horny secretion of the nail and a change in that product, as occurs in the case of the superficial syphilides. The morbid action, in short, is always the same, only its effects are somewhat different. It would be useless to revert here to each of the elementary lesions which may supervene in such a case, since they are similar to those which we have just been studying. These lesions commence at one of the points of the half-moon, then supervenes an ulcer which cuts deeply, and the extremity of the finger or toe, swelled and of a violet colour, becomes the seat of pains which are often very severe. The nail, softened, thickened, and greatly changed, sometimes ends by falling off, and in the phalanx may be observed changes such as caries and necrosis.*

The course of this variety of onyxia is generally longer and the prognosis more unfavourable than that of secondary onyxia. It will be understood how, under the influence of an osteitis or periostitis having its seat in the last phalanx, the secreting organ of the nail may become changed, and thence another variety of the affection in question, a variety with a peculiar course and characters to which we shall have to revert further on.

§ 2. Syphilitic lesions of the sub-cutaneous cellular tissue.

Nicolas Massa, De Morbo gallico, in Aphrodisiaco, Luisini, p. 43. Van Helmont, Tumulus pestis, p. 230. Francofurti, 1682. Fabrice d'Acquapendente, Tract. de operat. chirurg., tit. de gummatibus. Fracastor, De Morbis contagiosis, t. 2, c. xii. Castelli, Lexicon, &c. Geneva, 1746. • Boerhaave, Tractatus medicus de Lue aphrodisiaca, &c. Lugduni Batavorum, 1728; trad. française. Paris, 1753. Van Sieten, Commentaria in Herm. Boerhaavii aphorismos, t. v. p. 438. Paris, 1773. Astruc, Traité des maladies veneriennes, traduct. de Louis. Paris, 1777.

observers, especially Guensburg (*Découverte d'un mycoderme qui paraît constituer la maladie connue sous le nom de plica polonaise*. Comtes rendus des séances de l'Académie Royale des Sciences de Paris, t. 17, p. 250, et *Archiv. für Anat. und Physiol.*, Müller, 1845, p. 34), have sought to connect that affection with the presence of a mycoderme having its seat at the roots of the hair, but although their observations have not always been verified, it is none the less true that plica polonica is a disease entirely different from syphilis.

* See Delpéch, *Ulcération des contours des ongles, dans Chirurgie clinique de Montpellier*, 1823. Hamilton, *Syphilitic ulcers of the fingers and toes* (*Dublin Hospital Gaz.*, Dec. 1st, 1858).

Blancard, Lexicon. Leipzig, 1777. *John Hunter*, Treatise on the venereal disease. London, 1786, &c. *Cullerier*, Dictionnaire des sciences médicales, article Gomme. Paris, 1817. *Lagneau*, Dictionnaire des sciences médicales, art. Gomme. Paris, 1824, et Traité pratique des maladies syphilitiques, 1826. *Cazenave*, Traité des syphilides. Paris, 1843. *Lisfranc*, Dans *Journal de Médecine*, t. iv. p. 65, 1846. *Ricord*, Clinique iconographique de l'hôpital des vénériens. Paris, 1846. *Lebert*, Bulletin de la Société anatomique, 1855. *Robin*, *Ibid.* *Verneuil*, *Ibid.* *Saint-Arroman*, Des tumeurs gommeuses des tissus cellulaires et des muscles. Thèse de Paris, 1858, No. 53. *Thévenet*, Étude et considérations pratiques sur les tumeurs gommeuses du tissu cellulaire, des muscles et de leurs annexes. Thèse de Paris, 1858, No. 165. *Virchow*, Traité de la syphilis, constitutionnelle, trad. franç. par Paul Picard. Paris, 1859. *Van Oordt (H.)*, Des tumeurs gommeuses. Thèse de Paris, 1859, No. 44. *Gros et Lancereaux*, Des affections nerveuses syphilitiques. Paris, 1861. *E. Wagner*, Archiv der Heilkunde. Leipzig, 1863.

To the interest which otherwise attaches to the study of them the changes in the sub-cutaneous cellular tissue add the interesting peculiarity that they are the faithful image of the anatomical modifications which, under the influence of syphilis, develop themselves within the viscera. In fact, in the organs as in the cellulose-cutaneous stratum, it is always the cellular tissue which is the seat of the syphilitic process.

An induration of the sub-cutaneous cellular tissue sometimes co-exists with the syphilitic affections of the skin, and it appears that the dermic change then extends to the subjacent tissue; but, under other circumstances, this tissue becomes indurated primarily to a greater or less extent, and without previous lesion of the integument. This modification constitutes one of the forms (*diffused form*) of the syphilitic manifestations of the sub-cutaneous stratum. Side by side with this change is one much more frequent, more clearly circumscribed, characterised by the presence of rounded, firm, and prominent deposits known under the name of *Gummy tumours*. For this last change the denomination of *gummy form* has, therefore, properly been assigned.

A. DIFFUSE LESIONS.—DIFFUSE INFLAMMATION OF THE SUB-CUTANEOUS CELLULAR TISSUE.

The diffuse change of the sub-cutaneous cellular tissue has hitherto been little studied, for Vidal de Cassis, the only author whom we know to have spoken of it, merely mentions it. This is not, however, a gap that we should regret too much. In fact, considered

both in an anatomical and a semeiological point of view, this lesion differs little from the circumscribed or gummy product, and, like the latter, it is characterised by hyperplasm of the conjunctive tissue, and its evolution is slow and chronic, as is that of all the syphilitic affections which supervene at this advanced period of the disease. The following case is an example of it;—

OBS. XVI.—P., a charwoman, æt. 48, entered the Hôtel-Dieu in 1859. Of somewhat feeble constitution and shattered health, she refused to communicate her antecedents. She denied having had any syphilitic affection. She said that she had pimples on the hairy scalp when 28 years old. For the last six years she has suffered constantly from pains in the shoulders and knees. About four years ago, she observed in the sterno-clavicular regions small tumours which terminated in ulceration, leaving behind them deep and whitish cicatrices. For some weeks there has existed at the posterior part of the left side of the face an induration pretty uniform and without œdema. At present, August 14th, 1859, this induration occupies the cellular tissue of the parotid region and neighbouring portion of the cheek. It is from five to six centimeters in extent. The skin which covers it, slightly pink, presents on its surface a few projections and a few ulcers of little depth, chiefly situated in the neighbourhood of the ear; but no fistulous canals are observed. Iodide of potassium was ordered by M. Béraud, who diagnosed an affection of syphilitic origin. Three weeks of this treatment sufficed to remove this induration almost entirely.

We might be tempted to assume in this case the existence of a tubercular syphilide; but however this may be, it must be acknowledged that, apart from the projections in the skin, the cellular tissue was here indurated over a great extent.

We will not dwell longer upon this anatomical modification, which we shall frequently have the opportunity of observing in the viscera in the form of diffuse or interstitial inflammation, and which, for that reason at least, deserved a moment's attention.

B. CIRCUMSCRIBED LESIONS.—GUMMY TUMOURS OF THE SUB-CUTANEOUS CELLULAR TISSUE.

Synonymy: Gumma gallicum, gummi, gummositas, nodus, tuberculus syphiliticus, knotty tumours, nodules, syphilitic tumours and deposits.

Anatomical study.—Gummy tumours of the sub-cutaneous cellular tissue present themselves in the form of irregular masses, varying in size from a nut to a hen's-egg. Situated in the substance of the sub-cutaneous cellular tissue and sometimes adherent to the deeper

layers of the dermis, these tumours have a greyish or yellowish tint. They are sometimes soft and analogous to a solution of gum; they are sometimes solid, firm, white or yellowish, and not very unlike fibrous tumours. In general, these masses are encysted in a fibrous, whitish, solid, resistant tissue; their appearance on section is variable, they are dry or moist, and in the latter case they give exit to a greyish, semi-fluid and, as it were, gelatinous substance, or to a whitish fluid which was long confounded with pus. Sometimes scattered or disseminated, they are at other times grouped together in certain regions, and arranged symmetrically.

The numerous microscopical researches of which these products have been the object of late have made us better acquainted with their anatomical structure. In the sixteenth century (see Fracastor), these tumours were regarded as being formed by a collection of fluid, and at no distant period this opinion was still accredited (Dittrich, Billroth). It is clearly established now that these tumours, whatever their consistence may be, whether soft, gelatinous, or solid, are always organised, *i.e.*, composed of perfectly defined elements and such as belong to the group of elements of the conjunctive tissue.

Lebert, Charles Robin, and Verneuil, who, in France, have carefully studied the histology of the syphilitic tumours in question, agree in recognising that these products are composed, in the recent state, of collections of small round corpuscles (cytoblastia of Ch. Robin) disseminated through a finely-grained intermediate mass; of elongated or fusiform cells; and of vessels in small number. Later on, there are seen only granulations, detritus of the preceding elements, and conjunctive tissue. According to Virchow, as we know, all the gummy tumours result from a proliferation of the conjunctive tissue; but in the gummy tumours of the cellular tissue, the proliferation gaining the ascendant, the intercellular tissue rapidly becomes soft, gelatinous, mucous or fluid; the mass of the tumour melts, so to speak, becomes puriform, bursts externally, and ulcerates. In the main, all these authors recognise the same anatomical elements in gummy tumours. Moreover, whatever may be the theoretical interpretation of the mode of formation and the development of these tumours, it is clear that they have one and the same origin. This opinion, which we have elsewhere expressed in the following terms, always appears to us correct:—"The constituent elements of gummy tumours have always appeared to us to belong

to the cellular, or conjunctive tissue, which induces us to believe that the tendency of syphilis is to produce everywhere the elements of that tissue, under special conditions, however, by virtue of which those elements, with difficulty attaining their full development, undergo, almost necessarily, fatty degeneration and break up."* It is to this degeneration or rather metamorphosis of gummy products that is due the central softening of these tumours, a retrograde process which has often wrongly been confounded with an inflammatory or suppurative process. Such are, in their various anatomical phases, the gummy tumours of the sub-cutaneous cellular tissue. Further on, we shall dwell more upon the specific characters of these products and upon the peculiarities which distinguish them from the non-syphilitic neoplasms.

Symptomatic study.—The sub-cutaneous gummy tumours form and develop themselves slowly and unobserved, without causing pain or any disagreeable sensation, so that the patient who is the subject of them very often only discovers their existence accidentally. They begin by a small protuberance which gradually becomes larger and ends by attaining the size of a nut or a walnut. Globular in shape, most frequently painless when pressed (unless in the vicinity of a nerve filament), these tumours are hard, elastic, and covered at first by the integument to which they are attached by means of a small pedicle. Under these circumstances, they may move freely under the skin.

After a longer or shorter interval, one of several weeks generally, they soften, adhere to the under surface of the dermis, lose their mobility, and at the same time by their consistence give rise to a sensation somewhat analogous to that furnished by certain lipomas. The skin soon assumes a red tint, and becomes the seat of an inflammation remarkable for the slowness of its course. Later on it becomes mottled and thin, and often ends by becoming perforated at several points. Then is seen, through these openings in the skin, a whitish or yellowish mass, a kind of core comparable, sometimes to a piece of codfish or of veal scarcely cooked, sometimes to a solution of gum, the latter especially when the tumour develops itself in the vicinity of the bones or tendons.

By degrees the softened and broken-down substance, forming a core or a dry eschar, becomes eliminated. A cavity remains, a kind

* *Traité des affections nerveuses syphilitiques*, p. 156, 1861.

of hollow space with indurated base and irregular walls, bounded by a shell or species of cyst which, according to Vidal, must itself undergo destruction or elimination to render the reparation complete. Bazin asserts that the floor of this cavity generally presents several superposed layers; it is covered with a whitish putrilaginous coating. Fleshy granulations appear and cicatrization gradually takes place, leaving behind it a depressed cicatrix, more or less exactly rounded, white, defined and brownish at its circumference, at least for a certain time.

The slow evolution of gummy tumours of the cellular tissue admits of our following exactly their successive stages, which are three in number. In the first stage, the gummy tumour attains its full development. In the second, it undergoes a true retrograde metamorphosis. In the third, it is either absorbed or eliminated.

Seat and number.—The seat of the sub-cutaneous gummy tumours is very variable, as these tumours may occupy the most different points of the sub-dermic tissue. The head, the anterior portion of the chest and especially the clavicular regions, the anterior surface of the upper and lower extremities, the shoulders, are the points where they are most frequently observed. They are also found in other places which it is necessary to point out on account of the errors in diagnosis which they may occasion and of the peculiar symptoms to which they give rise: these are the regions of the neck, the lips, the scrotum and the nipples. To point out these regions is to name the special lesions with which they may be confounded. These tumours are sometimes single, but several may exist in the same individual, four, five or even a greater number; as many as 150 have been observed (Lisfranc).

Diagnosis.—In presence of the numerous varieties which sub-cutaneous gummy tumours present in the course of their evolution, it is easy to understand the difficulty of an exact diagnosis. After the deep-seated and tardy syphilides which may simulate these morbid products, without inconveniencing the patient however, the changes which tend most to cause mistakes are furuncle, cancer, indolent abscesses, and fibrous tumours. In a child which I saw in 1859, under the care of Professor Trousseau, there existed, at the posterior part of the calf of the right leg, two deep ulcers the size of a half-franc piece, with a greyish floor and edges sharply defined, except that the ulceration was somewhat more extensive on a level with the

skin. At the same time were seen, in the folds of the groins and thighs, superficial ulcers very analogous to mucous patches. The child also had coryza. The combination of all these circumstances suggested the idea of hereditary syphilis; recovery was rapid; later on, I was enabled to ascertain that it was a question simply of ulcers developed under the influence of want of cleanliness. The absence of cachexia, the good health of the little patient, and also the fact that it is not common to see gummy tumours coexisting with mucous patches, such were here the means for avoiding a mistake. Furuncle, on the other hand, has an evolution more acute and more rapid than syphilitic gummy tumours.

Cancer of the skin could not easily be confounded with the change we are now considering. As regards cancer of the cellular tissue, it does not present the various stages of development of gummy tumours. The same may be said of indolent abscesses, soft and fluctuating at their commencement, and of fibrous tumours, which, in general, do not undergo any kind of softening. Hernias and aneurismal tumours are distinguished by their peculiar characteristics. The commemorative circumstances and usual concomitant manifestations are of great importance here; but, however the case may be, it must not be forgotten that the inaccurate and incomplete information given by the patients may sometimes lead the physician into error.

Prognosis.—The prognosis of sub-cutaneous gummy tumours is unfavourable, inasmuch as their presence, being an indication of tertiary syphilis, denotes a profound injury to the organism. Rarely, however, is the danger of these affections direct, since the functional disturbances which result from them are either null or, at least, without importance.

Serpiginous gummy syphilide occupying the upper and anterior part of the left leg.

OBS. XVII.—B. L., a sempstress, æt. 55, a woman of strong constitution, has a fresh colour and degree of stoutness which prevents any idea of a cachetic condition.

She began to menstruate at 11 years of age. From that period until the age of 15 or 16, menstruation occurred only once a year. For two years she had frequent vomiting, but sometimes also a great appetite and gastralgia. Menstruation having become regular, she married at 21.

At 25, she had a child, which, seven or eight days after birth, was attacked by purulent conjunctivitis and lost one of its eyes. This affection, according to the account of the physician who treated the child, was

to be attributed to a gonorrhœa which the mother had had during her pregnancy. After her confinement, this woman observed that her husband was suffering from a disease of which she did not know the nature. She also remarked that she herself had some pimples on the genital organs.

After having suffered for two years from fluor albus, which yielded at last to preparations of gall-nuts, she was attacked by obstinate diarrhœa. After a short time, she felt severe pains, with nocturnal exacerbations, in the legs, and at the same time a cutaneous eruption broke out. After taking mercurial pills for three weeks, all these symptoms disappeared. Some months later, there was iritis in the right eye. The contracted pupil was covered with a false membrane. Sight, which was almost lost in the right eye, was much weakened in the left.

At the age of 32 years, this patient felt for the first time acute pains in the head; also pains in the legs and ears. Iodide of potassium relieved these pains, which returned, however, as soon as the use of that medicine was abandoned. There was vertigo, without paralysis.

After all treatment had been given up, there supervened a small gummy tumour above the knee. This tumour soon softened, and was succeeded by a deep ulcer. Iodide of potassium caused it to cicatrise, but other tumours afterwards appeared in the vicinity, all of which ran the same course.

At present, November 23rd, 1859, on admission into the Hôtel-Dieu, this patient presented on the anterior surface of the leg and knee, to the extent of twelve centimeters in height by eight centimeters in breadth, an ulcerated and already partly cicatrised surface. The central portion was whitish and mottled, at other points were seen rather deep ulcers, with a greyish floor and fleshy granulations; from three to five in number, these ulcers were seated upon a surface circumscribed above by an ulcer in the shape of a horseshoe, which suppurated and was covered with pink fleshy granulations at the edges. At the lower part of the leg were found several analogous ulcers, only smaller.

Iodide of potassium and mercury given at the same time produced a rapid amelioration and the patient soon left the hospital.

Gummy tumours of the sub-cutaneous cellular tissue.

Obs. XVIII.—Clarissa B., æt. 32, entered the Hôtel-Dieu, May 3rd, 1859, under the care of Prof. Laugier. The father of this patient died of dropsy, the mother, æt. 66, suffers from rheumatic pains, her husband had been a soldier, but was said never to have been affected with venereal disease.

As regards the patient herself, she related that she had always enjoyed good health until the month of December, 1852, when she saw a man fall near her who had been struck by a ball. The emotion she experienced therefrom was said to have been so violent as to have occasioned serious derangement of her health, such as phlegmons at various points of the body, particularly upon the face and about the left eye, which she lost in February, 1853: an *anthrax* upon the neck (evidently a gummy tumour),

which supervened six months after that accident, had a duration of several months.

Three weeks before her admission, she observed two tumours appear, one on the left tibia, now ulcerating, with a gangrenous appearance of its surface, the other, which appeared some days later, in the same region and having the same appearance as the first. There is severe pain in the vicinity of the diseased points, complete insomnia and intense diarrhœa. All these symptoms were relieved in a short time and under the influence of iodide of potassium, and the patient was able to sleep again.

May 14th.—Marked improvement. Granulations are forming, and the patient went out June 14th, with only two small ulcers the size of a half-franc piece, very superficial and giving promise of early cicatrisation.

A week after her dismissal, this patient again entered the hospital, with a hard tumour the size of a nut upon the right leg. The tumour was sub-cutaneous, and the skin all round it red. At the end of eighteen days, a small black point was observed at its summit. The skin thus affected ulcerated, forming a circular opening with regular edges, at the bottom of which was seen an eschar, of a yellowish white colour and somewhat fleshy. This eschar, having been eliminated after some time, was followed by fleshy granulations which soon, under treatment, developed themselves over the whole extent of the sore.

The floor of the ulcer gradually became raised and reached the level of the skin. The epithelium was reproduced at the circumference, and cicatrisation was almost complete when the patient went out. On the 4th of June, the old ulcers presented only a few granulations not yet cicatrised. The patient left the hospital after about three weeks' treatment with iodide of potassium.

Gummy tumour of the left leg.

Obs. XIX.—M., female servant, æt. 57, admitted into the Hôtel-Dieu July 30th, 1859, is a woman with every appearance of strength and health; she denies ever having had any primary or even secondary symptoms, but confesses to having been very loose in her habits, so that the existence of such affections appears by no means improbable. More than a month ago, she observed on the anterior part of the left leg, two tumours the size of a large nut. These tumours, sub-cutaneous at first, finished by ulcerating the skin; on the floor of these ulcers is now seen a dry, withered, completely white substance, greatly resembling dead cellular tissue, or a piece of codfish. Examined with the microscope, this substance is seen to be composed of greyish or yellowish granulations; of small spherical nuclei free or enclosed in highly granular cells; of fusiform bodies more or less regular and granular; and of detritus of cells and nuclei; there is also seen a slightly striated mass, covered with fatty granulations resembling pretty closely the fibrinous exudation met with on the surface of the valves of the heart.

Multiple gummy tumours of the left leg; partial destruction of the velum palati; crustaceous syphilide of the hairy scalp; general alopecia.

Obs. XX.—Rose P., a charwoman, æt. 39, was admitted into the Hôtel-

Dieu July 1st, 1859. This woman, who was emaciated and of small stature, presented the appearance of an advanced state of cachexia. Her voice, almost unintelligible on account of the destruction of the velum palati, her stupidity, and the remarkable tendency to cry when questioned about herself, rendered it very difficult to obtain information as to her morbid antecedents.

She told us, however, that her hair fell off about two years ago; from that time she had crusts and ulcers on the head (crustaceous syphilide). Since admission, these crusts have fallen off and the head is now, July 25th, smooth and completely bare. Moreover, there exist upon the left knee, on its internal and anterior portion, several sores slightly excavated, covered with fleshy granulations, and not yet completely cicatrised. These sores, which followed firm tumours developed spontaneously, are manifestly due to softened gummy tumours. On the inner and lower part of the same leg is observed another sore, of about eight centimeters in diameter, covered with fungous granulations, already partly cicatrised at the edges and above it some oedematous swelling, which burst a few days later.

Under the influence of iodide of potassium, all these symptoms rapidly disappeared, and on September 1st, when she went out, the patient was much improved in her general health also. The crustaceous syphilide of the hairy scalp had entirely disappeared.

Two peculiarities strike us in the cases related above. On the one hand, it is the long period of time which elapsed between the primary lesion and the gummy formation; on the other hand, the almost constant absence of secondary manifestations in the patients. This latter remark, to which we shall have occasion to revert, is not only peculiar to these cases, it is applicable also to others. In this respect, the chapter which Bazin has devoted to gummy syphilide of the skin may be consulted with interest.*

SYPHILITIC AFFECTIONS OF THE MAMMARY GLANDS.

Somewhat rare, or rather little known, the syphilitic changes of the mammary glands have, it may at least be permitted to suppose, more than once given rise to mistakes prejudicial to the patient. They did not, however, entirely escape the sagacity of some physicians of the last centuries, whom clinical observation led to admit *venereal cancer* of the breast.

The celebrated Sauvages,† who was one of the first to point out the existence of these manifestations, gives the two following cases in reference thereto:—

* Bazin, *Leçons sur les syphilides*. Paris, 1859, p. 197 et suiv.

† *Nosologie méthodique*, t. iv. p. 344.

1st. I saw, he says, some years ago, at Alais, a woman who had been attacked by the venereal poison, and who had long had at the nipple a carcinoma the size of a child's head. This tumour was ulcerated when I prescribed mercurial inunction for the patient. In a very short time, the tumour diminished considerably in volume. However, the carcinoma not being entirely cured, recourse was had to extirpation.

This first case is far from being conclusive, and doubt may still be entertained as to the origin of the mammary affection, but the same cannot be said of the following observation, which appears demonstrative :—

2nd. An unmarried woman, æt. 30, who had been using for several months the extract of hyoscyamus, presented in each breast a tumour the size of a hen's-egg. Dense and knobby, this tumour caused lancinating pains which extended at times as far as the axillary region, along a chain of glands equally hard and knobby. The patient had ulcers in the mouth and vagina, resulting from syphilis acquired ten years before. Keyser's pills, continued for a month, caused the disappearance of the painful tumours and other syphilitic manifestations, which did not return.

The abundance of the details and the clearness of the description bear witness in a peremptory manner to the accuracy of the diagnosis, which the peculiar circumstances, such as the age of the patient and the symmetry of the morbid change, contribute further to place beyond doubt. Yvaren, who relates these two cases, gives a third furnished by one of his colleagues, but in which there is question of an affection of the skin, or of the cellulo-adipose tissue, rather than of a lesion of the mammary gland itself.*

Astruc, in a passage of his book, no doubt alludes to the change in question when he says :—"Women have diseases which are peculiar to them, such as cancer of the breast, suppression of menstruation, &c." (*Loc. cit.*, t. iv. p. 151.)

Hunter, Swediaur, Bell, do not speak at all of syphilitic changes in the breasts. Neither does Astley Cooper make any mention of them, so that we must come down to our own times to find fresh data on this subject.

Studied in both sexes, syphilitic lesions of the mammary glands do not differ from those of all the other organs; it is possible to

* *Des métamorphoses de la syphilis.* Paris, 1854, p. 435.

recognise two distinct forms: diffused, they constitute *syphilitic mastitis*, properly so called; circumscribed, it is the gummy change in the breasts, or *gummy mastitis*. Diffused syphilitic mastitis has been described by Dr. Ambrosoli in a recent work* in which are related three cases of that affection. One of these cases refers to a blacksmith who, towards the end of the secondary period, observed in the neighbourhood of the nipple a swelling which attained the size of a large button. The two other cases are those of two young women, the one 19, the other 24 years of age, who both presented, soon after the disappearance of syphilitic exanthema, a diffused, firm, somewhat painful swelling, without change of colour of the skin. There existed at the same time some indurated glands in the axilla. Iodide of potassium in large doses effected the removal of these symptoms without leaving any trace of their existence. I have, myself, seen a very similar case.

Verneuil† presented to the Anatomical Society a pathological specimen from a man the subject of multiple gummy tumours, in whom he found a tumour of the breast six centimeters in diameter and three in thickness, which was on the point of perforating the skin. The tissue of this tumour, which he regarded as a gummy tumour, resembled that of encephaloid softened. An abundant fluid oozed out on pressure, which was creamy, lactescent, and miscible with water.

Maissonneuve‡ asserts that syphilitic affections of the breast are not rare. He is of opinion that we should consider as such a considerable number of pretended cancers cured by preparations of iodine. We take the same view, although it appears to us that tumours of a nature differing from that of gummy products may sometimes yield to the administration of that drug.

Richet expresses himself as follows in reference to syphilis of the breast§:—"We observe in the breast a variety of tumour which supervenes under the influence of the syphilitic diathesis; it is the syphilitic tumour of the breast, analogous to the tumour of the

* *Di una malattia, &c. Sur une maladie de la glande mammaire qui s'associe avec différentes formes de la syphilis.* (Gazetta medica Lombarda, No. 36, 1864.)

† *Bulletin de la Société anatomique*, 30^e année, p. 96.

‡ *Leçons cliniques sur les maladies cancéreuses*, 1854.

§ Richet, *Traité d'anatomie chirurgicale*, p. 513, 1^{re} édit., 1857.

same name which is met with in the testicle. This tumour presents itself at first with all the characters of a schirrous tumour, and I confess that in a case observed at the Lourcine Hospital, extirpation was on the point of being performed when the discovery of another tumour if not similar at least analogous, in the calf of the leg, induced us to wait. The simultaneous disappearance of these two tumours under an appropriate treatment completely removed all doubt."

* In his excellent *Traité des maladies du sein*, Professor Velpeau makes mention of four cases more recently observed by Maisonneuve. One of these is a case of simple gummy tumour; in the three others, there was at the same time ulceration of the integument and circumscribed congestion of the tissue of the mammary gland. In all, there existed simultaneously other syphilitic manifestations, such as gummy tumours on the head, periostoses, and ulcers upon the legs. The cure was effected rapidly by means of preparations of iodine. The same professor also reports the following case communicated to him by Dr. Richet* :—

Rose M., female servant, æt. 22, entered the Lourcine Hospital under my care, May 11th, 1849. On her admission, I found mucous patches on the labia majora, rhagades at the anus, an abundant vaginal discharge, and an affection of the neck of the uterus implicating both lips.

The neck of the uterus was cauterised, a plug soaked in a solution of alum introduced into the vagina, and pills of proto-iodide of mercury administered to the patient. At the end of a month, the mucous patches appeared to have remained stationary: ordered Van Swieten's drops (bichloride of mercury).

July 1st, i.e., a month after commencing the new treatment, the condition of the patient is not only not improved, but presents even an aggravation as regards the genital organs. July 25th, the patient complained of an old pain in the right breast. On examination, I found a tumour the size of a chestnut, hard, pretty distinctly defined, without change of colour of the skin and without pain on pressure, situated in the neighbourhood of the nipple, which it surrounds at its base. The patient states that she noticed this tumour about a week before and had observed its progressive enlargement.

August 1st.—The tumour has increased sensibly in volume, but remains hard, without pain when touched and without redness of the skin. The nipple which it surrounds is retracted, that of the opposite side, on the contrary, very prominent. According to the patient's account, they were identical previously to the appearance of the tumour. The patient com-

* Velpeau, *Traité des maladies du sein*, 2^{me} édit., p. 534.

plaints of spontaneous shooting pains, night and day, in the breast affected. There is no fever, and the appetite continues good. Anyone who had not observed the commencement of this affection, and did not know the antecedents of the patient, would have been unable to distinguish this tumour from that known under the name of schirrhous of the lactiferous ducts.

August 6th.—The tumour is sensibly enlarged, but its consistence remains the same, and although the skin has assumed a bronze tint, no fluctuation can be detected at any point. The nipple, completely retracted, has almost disappeared. The whole size of the tumour is that of a small apple. The patient complains of sharp and repeated shooting pains.—The internal treatment is continued; the breast is covered with a large Vigo's plaster (a complex plaster containing a considerable quantity of mercury). On the following days, the progressive development of the tumour continued.

August 15th.—The skin is beginning to redden below the depression occupied by the nipple. Fluctuation soon manifested itself at that point, and on the 25th the surgeon plunged a narrow bistoury into the tumour; from the opening there issued a large quantity of viscous pus mixed with flakes, altogether analogous to that which issues from syphilitic gummy tumours. Some days after, the breast had diminished considerably in volume and the nipple was beginning to come forward again, but the parietes of the cavity continued hard, and appeared to have little tendency to cicatrization.—Iodine injections were ordered.

September 17th.—The cavity appears to be growing more healthy and the mucous patches have almost entirely disappeared, but the patient presents upon the left leg (lower third, antero-internal region) a hard, clammy, indolent tumour about as big as a five-franc piece. This tumour, which showed a great analogy to that in the breast, had supervened only a few days before, and, like the first, was very evidently under the influence of the syphilitic infection.

From this time, Sédillot's pills were given at the same time with iodide of potassium, which had not yet been administered. After two months of this treatment of the tertiary symptoms, she left the hospital cured November 24th, having been in it five months.

Such are the data which we possess in reference to syphilitic lesions of the mammary glands. The last case, which we were anxious to report at length, appears to us to leave no doubt as to their existence. It presents us, in one of those glands, with a gummy tumour analogous to those which we had already met with in the cellular tissue, and which we shall find again later on in other organs.*

* A fresh case of syphilitic tumour simulating a cancer of the breast has been communicated to the Medical Society of Lyons, and published in the *Reports* of that society, afterwards in the *Journal of Medicine of*

Diagnosis and prognosis.—Cancer and adenoma of the breast are the chief affections with which syphilitic lesions of the breasts might be confounded. But the cancerous tumour is distinguished by a more rapid development, by the ulcerations which are the consequence of it, and by the glandular lesions by which it is frequently accompanied. The antecedents of the patient, the concomitant affections, and the fact that the syphilitic affection of the breasts is almost always symmetrical (as observed by Sauvage, &c.), are so many circumstances which come powerfully in aid of the diagnosis.

Adenoma presents greater difficulties: it may be recognised, in general, by the slowness of its evolution and by the always equal hardness which contrasts with the progressive softening of the gummy tumour.

The prognosis of syphilitic affections of the breast is favourable, since it suffices, for their cure, to know how to recognise them. It is to be regretted, however, that the study of them has hitherto been so incomplete and so obscure; for an exact knowledge of these morbid manifestations would permit, more frequently perhaps than is generally imagined, of substituting for an operation which is not free from danger a treatment certain and always inoffensive.

ARTICLE II.—APPARATUS OF LOCOMOTION.

§ 1. *Syphilitic affections of the bones, cartilages, and joints.*

Cataneus, J. Benedictus, Fracastor, in *Luisin. Aphrodis.*, 139A, 180B, 199D. *Grundpeck, Schellig, Widmann, Rant*, in *Fuchs: Die ältesten Schriftsteller, in Deutschland, über die Lustseuche, &c.* Göttingen, 1843, 60, 65, 66, 74, 99, 287. *Joannes de Vigo*, *De morbo gallico Tractatus*, in

Lyons, January, 1867, p. 21. It refers to a woman, æt. 50, who had had a primary lesion ten years before, and in whom the existence of syphilis was revealed by numerous cicatrices in the skin, by the destruction of the velum palati, by epileptiform attacks, a sub-cutaneous gummy tumour, and a periostosis of the clavicle. The tumour of the breast, of about the size of a hen's-egg, occupied the lower and outer portion of the gland. It was uneven, hard, painful on pressure, with one soft and fluctuating point. It was the seat of spontaneous, not very severe pains, which radiated towards the shoulder; and in the axilla were three hard, indolent glands of the size of an almond. Under the influence of an anti-syphilitic treatment, the tumour and the glands in the axilla diminished in volume and the patient gained flesh. An ulcer formed at the point of softening, but soon became cicatrised under the influence of iodide of potassium, a cure was effected, and no relapse had occurred six months later.

Luisin. Aphrodis., p. 450. *G. Fallopius*, De morbo gallico liber absolutissimus. Patavii, 1564, p. 59, et Aphrodisiac., pp. 781 et 826. *Van Swieten*, Commentaria in Herm. Boerhavii Aphorismos, t. v. p. 438. Paris, 1773. *J. B. Morgagni*, Recherches anatom. sur les causes et le siège des maladies. Lettre 58^e, p. 423, of the French translation by Destouet. *Bernard Tomitanus*, De morbo gallico, in Aphrodis., p. 1102, § Articulorum dolor. *Alexandre Traj. Petronius*, in Aphrodis., p. 1362. *Joan. Ch. Heine*, Tentamen medico-chirurg. de præcipuis ossium morbis, § 29. *J. L. Petit*, Traité des maladies des os. Paris, 1735. *Duverney*, Maladies des os, Paris, 1751, t. ii. p. 479, distinguishes exostoses from nodes. *Heister*, Dissertat. de oss. tumoribus, No. 15. *Astruc*, De morbis venereis, &c., 1777. *Boettcher*, Abhandl. von den Krankheiten der Knochen, Knorpel und Sehnen. Königsberg and Leipzig, 1793, t. ii. p. 27. *A. Bonn*, Descriptio thesauri ossium morborum Hoviani. Amsterdam, 1783, in 4^{to}. *Swedjaur*, Traité des maladies syphilitiques, en français. Paris, 1801, t. ii. p. 179. *Benj. Bell*, Treatise on gonorrhœa virulenta and the venereal disease. *Delpech*, Chirurgie clinique de Montpellier. Paris and Montpellier, 1823, t. i. p. 373. *Hunter*, Complete works, note by Babington, p. 565. *Dufour*, Bulletin de la Société anatomique, t. xxvi. p. 139. *Vidal (de Cassis)*, Traité des maladies vénériennes. Paris, 1853. *Waller*, Sur la syphilis des os, Vierteljahrsschrift für die praktische Heilkunde, année 1854, et *Gaz. méd. de Paris*, 1855, p. 647. *Virchow*, La syphilis constitut., 1860, p. 29 et seq. *Richet*, Mémoires de l'Académie de médecine, 1853, t. xvii. Travail consciencieux qui contient plusieurs observations d'arthropathies syphilitiques. *Ricord*, Iconograph., et *Gaz. des Hôpitaux*, 1846, p. 647. *Gosselin*, Remarq. sur une nouv. source d'indic. du trépan dans les ostéites syphilitiques du crâne, Archiv. gén. de médecine, et *Revue Méd.-Chirurg. de Paris*, t. xiii. 1853, p. 361. *Owen Daly*, Syphilitic disease of the sternum, *Dublin Hosp. Gaz.*, No. 6, 1857. *Breslau*, Syphilitische Schädelatrophie, ans den Verhandl. des ärztl. Ver. zu München, Sitzung vom 13, Jan., 1858. *Bayer*, ärztl. Intelligenz-Blatt, No. 13, 1859. *Virchow's Archiv für path. Anat.*, Bd. xvii. Heft 3 and 4. *A. L. Jetteles*, Gibt es eine Knochen—Syphilis? Olmutz, 1862. *Schmidt's Jarb.*, tom. cxx. 1863. *Erichsen*, Necrosis of the clavicle, following syphilis treated without mercury, *Lancet*, Jan. 2, 1863. *R. Sanderson*, Syphilitic necrosis of the cervical vertebra; sudden death, *American Med. Times*, new series, viii. 4, 5, Jan. *E. Follin*, Traité element. de path. externe, t. i. p. 712.

A. SYPHILITIC OSTEOPATHIES.

The knowledge of the syphilitic affections of the bones goes back as far as the sixteenth century. Jean de Vigo* and Gab. Fallopius are the authors of that period who have left us the most important data on this subject. After having spoken of osteocopic pains, G.

* See *Aphrodisiacus*, p. 450.

Fallopious mentions as follows the gummy products of the bones:—
 “Verum accidit ut post dolores vel cum doloribus tumores infestant circa articulas, internodia, in media fibula, in medio cubito, et his caput sæpe coronatur, ut regni gallici insignia præ se ferat. Isti tumores, cum contineant materiam crassam, quæ est veluti gummi eliquatum, ideo guminata gallica vocantur a medicis. Hi tumores duorum sunt generum, alter tophaceus est, alter autem minime. Tophacei sunt constantes ex materia penitus lapidosa et videntur veluti tophi ossei, vel materia illa, qua ligantur ossa fracta. Secunda species tumorum est, quando materies est mollis, quæ tripliciter apparet, nam aliquando est veluti laridum, aliquando est minus crassa et est similis polentæ, et est atheroma gallicum. Tertia species est sicut mel et dicitur meliceris gallica. In capite ut plurimum sunt vel substantia laridi vel mellis, vel polentæ. Circa pedes sunt majori ex parte lapidosi et tophacei, ita in tibiis, in intermediis, nunc tophacei, nunc molles existunt. Loca sunt ligamenta articulorum, corpora ossium, periostia, in quibus tumores dolorosissimi sunt; aliquando in superficie ossis crescit affectus iste. Materia est ut plurimum pituitosa, tenax et melancolica, cum natura bene concoquere non potest; aliquando miscetur bilis, et ita fit meliceris; aliquando crassa est, et melancolica, et fit tophus, vel steatomata.* . . .”

After Fallopious, Duverney, Brandi, Astruc, J. L. Petit, Hunter, Swediaur, Boettcher, B. Bell, Delpach, Ricord and Virchow, are the authors who have studied most carefully the syphilitic lesions of the bones. However, in spite of their writings and those of many others, the truth is that these affections are as yet very little known, so that a more profound inquiry into the subject is much wanted in the present day. Useful data would be found in the authors mentioned above, and especially in Virchow's treatise on constitutional syphilis.

The syphilitic lesions of the osseous system assume various forms. Bazin recognises in them three anatomical types: the inflammatory, the hypertrophic, and the heteromorphous type. The existence of these various types is incontestable; but, in our opinion, the hypertrophic type, in which the learned physician of Saint-Louis includes exostosis and hyperostosis, is not necessarily distinguishable from the other two. Exostosis and hyperostosis having most frequently as their origin an inflammation or a gummy lesion of the periosteum,

* *De morbo gallico liber absolutissimus.* Patavii, 1564, p. 59; et *Aphrodisiacus*, t. ii. cap. xv. p. 826.

it follows therefrom that the three types pointed out above may be divided into the two forms, the inflammatory and the gummy, under which we group most of the syphilitic lesions of the organs. To these two forms may well be added a third, represented by the change recently described under the name of *dry caries* (Virchow), and to which, in our opinion, the denomination of atrophic or cicatricial form is very applicable.

Inflammatory form.—*Osteo-periostitis.*—The lesions connected with this form may be studied simultaneously in the periosteum and in the bones, by reason of the intimate union of those parts, which concur in the formation of one and the same organ; let us not forget, however, that the vague data existing hitherto concerning this point in the history of syphilis render difficult an exact and positive description of these lesions which, we cannot help thinking, are comparatively less frequent than has been supposed. It is sometimes on a level with or in the vicinity of the periosteum, sometimes in the substance of the bone that the change in question commences; to injection more or less marked there soon succeeds the appearance of a neoplasm usually soft in consistence but sometimes pretty firm and resistant. On a level with the periosteum, this neoplasm forms a protuberance more or less circumscribed, a swelling the most projecting part of which is rounded, and the limits of which merge insensibly into the neighbouring tissues. In the thickness of the bone, dilated canals are observed containing a substance which has been compared to the bone plasma (*suc osseux*), or to callus. Under these circumstances, says Vidal, the bone is first spotted, its canals develop themselves, they contain red blood and a transparent fluid which resembles the bone plasma, and which is observed, moreover, in all cases of commencing osteitis, whatever their nature may be. But a thicker secretion is produced, which resembles that of callus; or it is an organisable plastic matter, like that of certain periostoses.* This matter, which may be reabsorbed, sometimes becomes definitively organised, and thus we may apply to the affection in question, at least as far as concerns the bones of the cranium, the following

* The organisable matter which appears in the bones or under the periosteum does not differ from that which becomes deposited elsewhere; it is formed of elements analogous to those of the embryonic and mucous forms of conjunctive tissue, or rather of lymphoid elements which resemble those of the lymphatic glands or of the spleen. When these elements undergo the granulo-fatty metamorphosis, the deposit assumes a caseous, tuberculiform appearance and, in some cases, ends by becoming partly or entirely absorbed.

description by Babington :—"The thickness of the bone is considerably increased, and the osseous tissue becomes dense and heavy. For the greater part of the time, the periosteum remains intact; but it frequently happens, in the course of the disease, that it becomes inflamed at circumscribed points, and then it is raised and forms small nodes. These nodes generally disappear at the end of one or two weeks, and are replaced by other similar tumours which form at other points and disappear in their turn in the same way. Sometimes, however, instead of disappearing, these nodes suppurate, and the surface of the bone becomes carious; but the portion of bone which dies and becomes eliminated is not considerable. The ulcer cicatrises without spreading, leaving the surface of the bone uneven, and a cicatrix adherent to the bony tissue. The increase in volume of the bone disappears at the same time that the disease is cured, except in cases in which it has existed for a long time." The thickening of the cranial vault in advanced syphilis is in all cases a frequent occurrence which we have had opportunities of verifying which we have pointed out elsewhere in an altogether special and manner.

To sum up, the tibia, the clavicle, the elbow, the bones of the cranium and the nose, in a word, all the superficial bones, are more especially the seat of the syphilitic inflammation. This inflammation most frequently terminates in resolution, if an appropriate treatment has been adopted; in the opposite case, calcareous elements are deposited in the neoplasm, whence a bony product which has received the name of exostosis or periostosis.

Syphilitic exostoses, the usual terminal lesions of osteo-periostitis, may, in certain cases at least, be due to the calcification of gummy tumours; but this latter origin, probably rather rare, need not occupy much of our attention. Of the size of a pea, a nut, or a walnut, hard and bony in consistence, these products are generally divided into parenchymatous and epiphyseal exostoses, or into internal and external exostoses, accordingly as they project at the interior or the exterior of the bony cavities.

Parenchymatous exostosis is observed after deep-seated osteitis, in consequence of the deposit of a new substance in the thickness of the bone itself. The new ossification may take on the character of the areolar tissue or that of the compact tissue. When consisting of layers with areolæ between them, some authors have given it the name of cellulose or laminated; when formed of compact

tissue, it is said to be eburnated when it produces with the augmentation of volume, increased weight and density of the bony tissue.* It may be remarked that these characters appear to belong to most exostoses.

Epiphyseal exostosis is rather a consequence of periostitis. In the beginning, this tumour, which is usually multiple, is close to the bone to which it ends by adhering, and hence the idea of comparing it to a kind of epiphysis of which the form is very variable. Sometimes hemispherical, at others it is conical, elongated, or flattened, or else it is in the form of a crest which affects the circular arrangement of certain syphilides (Ricord, *Iconographie*). Apart from this arrangement, to which, however, but little diagnostic value is to be attached, it must be admitted that syphilitic tumours of the bones are deficient in distinctive characters; moreover, the descriptions which have been given of them appear to have been in a great measure copied from those of tumours of the same structure and of a different nature.

Gummy form.—Gummy tumours of the bony tissue are by no means very rare. They occupy either the periosteum or the bone itself, and then the medullary substance is their most usual starting-point.

On a level with the periosteum, the gummy tumour presents itself in the form of a tumour with a fixed base, more or less circumscribed, soft and fluctuating, consisting of a substance sometimes analogous to a solution of gum, sometimes more consistent and of a whitish or yellowish colour. Like gummy tumours of the cellular tissue and of the muscles, this product ends in softening; it inflames, ulcerates the adjoining tissues, and perforates the skin in its vicinity. In other cases it becomes encrusted with calcareous salts in preference to any other gummy product, and thus constitutes a variety of exostosis or hyperostosis. When situated in the thickness of the bones, gummy tumours behave in a somewhat different manner, according as they invade one of the long bones or one of the flat bones. In the long bones, they have for their usual seat the medullary canal, as is shown in Ricord's plates,† and consist of a substance of the colour and consistence of a lardaceous product. In one of the cases quoted above, Ricord describes this change as follows:—

* Vidal, p. 483.

† *Iconographie*, pl. vii., bis et xxxi.

"Both radii, which were the seat of very acute osteocopic pains and of exostoses, presented at their lower part a very remarkable hypertrophy; the right radius had, at an inch and a half from its lower extremity, an enlargement considerable enough to suggest the idea, at the first moment, of an old fracture badly united; on more careful examination, it was soon observed that there was hypertrophy with development of the osseous canaliculæ; the bone was redder and more porous than anywhere else; the medulla was hardened, yellowish and resembled in appearance and consistence rancid bacon; the left radius was hypertrophied in the same manner, but to a much greater extent; the whole of the lower half was implicated." Most of the bones may become the seat of this change; in a second case observed by M. Ricord, it was the tibia which was affected.

Everything leads us to believe that gummy lesions of the medullary cavities of the bones are more frequent than would appear from the small number of cases known, and, if they are rarely observed, that depends evidently upon the carelessness with which the anatomical examination of the osseous system is generally carried out. When they occupy the flat bones, these products have for their favourite seat the bones of the cranium, where they most frequently develop themselves in the diploë, pushing back and separating the laminæ of the compact substance, and finally causing necrosis or even caries of it, as mentioned by Dittrich* in a case of infiltration of the bony substance by a greyish white exudation of lardaceous appearance. Sometimes the neoplasm becomes here a cause of perforation;† it does not differ otherwise from those of the medullary cavity of the long bones.‡ In a syphilitic new-born child, which had pemphigus and diseased lungs, Charrier found, between the bones of the skull and the dura mater, large spots which appeared to be suppurating.§ The microscopical examination of them made by Follin showed that these spots were composed of a mass of fibro-plastic tissue without any trace of pus. In two cases observed by Virchow, it was a question of a hard, dry, resistant mass, of a

* *Prager Vierteljahrschrift*, 1849, fasc. i. p. 20.

† See Obs. Dufour, *Bulletins de la Société anatomique*, 1853.

‡ Gosselin, *Sur une nouvelle indication du trépan* (*Archiv. méd. et Journal de Malgaigne*, 1853, t. xiii. p. 351).

§ *Gaz. des hôpitaux*, 1854, No. 43.

yellowish white colour, in which microscopical examination revealed a fatty metamorphosis with fine granulations, resulting from conjunctive corpuscles of new formation.*

Absorption of the new product, suppuration of the bone, caries and necrosis, such are the various modes of termination of gummy lesions of the bones. If, in fact, observation and analogy lead us to suppose that in certain cases these lesions are susceptible of being resolved and disappearing under an appropriate treatment, there is reason to believe that under other circumstances they soften and may become the starting-point of suppurative osteomyelitis, which is, in general, a serious disease. The following passage, which we borrow from Astruc, seems, at the very least, to support this view. "It has even been observed in dead bodies," says that author, "that the marrow of the bones was sometimes inflamed, suppurated, and ulcerated, which had caused in the hollow of the bones very severe pains with the sensation of breaking of them, abscesses, exostoses, and caries." This mode of termination is, nevertheless, rare; sometimes, indeed, the observer will have taken for pus what was nothing else than a softened gummy product.

Caries, which was well studied by Babington,† commences, says that author, in the reticular tissue of the bones and gradually perforates the external lamina. The disease then forms a soft tumour, which, if opened, gives exit to a glairy fluid. The periosteum is seen to be a little thickened, and the subjacent bone is denuded. At the centre of the denuded portion is seen a small hole which perforates the cortical layer of the bone and communicates with its interior. This affection is very common on the cranium, and is observed from time to time upon the tibiae, the lower jaw, and the elbow. In its severe forms it constitutes the *worm-eaten* caries which is sometimes seen to invade the bones of the skull to a great extent. This comparatively rare form of lesion, which has further the greatest analogy with the dry and atrophic caries of which we shall shortly have to speak, is evidently produced by the presence of a plastic or gummy deposit in the thickness of the osseous substance itself. In that respect especially it differs from most of the non-syphilitic forms of caries.

* *Gesammt. Abhandlungen*, p. 503, et *Pathologie cellulaire*, translated from the German of the second edition by Paul Picard. Paris, 1865.

† Hunter, *Treatise on Venereal Diseases*.

It is important to be acquainted with the *necroses* which succeed gummy lesions, on account of the special characters which they present in a certain number of cases. Virchow gives the following description of those amongst them which attack the bones of the cranium:—"This lesion usually proceeds from within outwards; a portion of necrosed bone, with large pores and, so to speak, a worm-eaten appearance, but with a plain surface, becomes separated from the living bone by an indented line of demarcation. The edges of the latter, which becomes more and more sclerosed, become raised by the apposition of fresh layers of bone, and project beyond the mortified portion. Analogous lesions occur, sometimes at a great distance from each other, sometimes side by side, and then they coalesce and occasion extensive mischief which destroys nearly the whole cranial vault. Symptoms of irritation of the periosteum are either entirely absent, or scarcely marked at all." But it is, above all, by the sequestrum pierced with holes and orifices which communicate in its interior that syphilitic necrosis may be more specially distinguished from other forms of necrosis, in which the sequestrum, when furnished by the cortical layer, presents a smooth, polished, compact, even surface with the appearance of normal bone; it may be added that the surrounding tissue, whether necrosed or not, is often eburnated and heavy, which forms a very marked contrast. It is also to be remarked that the syphilitic necroses of the bones of the cranium deposited in the Dupuytren Museum present an arrangement which calls to mind the half circles of certain annular or semi-annular syphilides. This circular or serpiginous arrangement belongs also, as we shall see, to certain lesions of the viscera.

Atrophic form, dry caries, bony cicatrices.—This change, already remarked by Bertrandi, Cullerier, and Ricord, is much better known since the interesting researches of Virchow were made. It has for its especial seat the bones of the cranium and often coexists with gummy tumours of the periosteum. From its slow and insidious commencement it is never observed until it has existed for some time. It shows itself at one or more points in the form of foci characterised at the centre by a process of thinning (regressive action) and at the circumference by a process of proliferation or hypertrophy (progressive action).

The thinning commences constantly by the dilatation of the medullary or vascular canals of the bones. Gaping orifices are observed, pores which are the extremities of the straight canals of

the cortical substance, and at the same time furrows converging towards the affected point, which are formed by canals parallel to the surface of the bone. At first the cortical substance of the bone becomes hollow over a small surface: this depression assumes a cracked appearance and presents a great analogy to certain cicatrices of the mucous membrane and especially to those which are the result of syphilitic ulcerations (mucous membrane of the vagina, nose, &c.). This stellated depression increases in circumference and depth; the medullary canals at the circumference become enlarged; the centre becomes depressed and assumes the form of a funnel, while the edges become perpendicular, brittle, and wrinkled. The cortical portion of the internal or external table sinks in gradually; the bottom of the funnel reaches the spongy portion of the diploë and sometimes there may be a true perforation of the bone, due to the meeting of two funnels at their extremities.

While the bone is thus wasting, an osseous substance, of new formation, is deposited at the periphery: at first it is a thin pellicle, soft and very vascular, which ossifies rapidly, forms a layer of whitish osteophytes, and ends by becoming incorporated with the original bone. Vascular in the first instance, the osteophyte gradually becomes eburnated and sclerosed, and produces a hyperostosis which forms around the depression an irregular and mammillated rim. Osseous substance is also deposited at the bottom of the part affected; new portions of bone are formed here which cause in the end a sclerosis of the whole diseased part. This sclerosis may extend very far and be continued to the opposite surface of the bone in a layer of osteophytes and hyperostoses.

As, upon the whole, everything leads to the belief that this particular lesion succeeds to a gummy infiltration of which it is only the last stage and, in some sort, the cicatrix, this is the moment for saying a few words concerning the syphilitic osseous *cicatrices* which follow caries and necrosis, and which, in Virchow's opinion, represent on a large scale that which exists on a small one in inflammatory atrophy: deficiency of productivity at the centre, excess of productivity at the periphery. If the bone has been entirely destroyed at one point, as is seen at the septum of the nose, the palate, &c., no regenerative tissue is in general formed, or at least no osseous product. This is nowhere more marked than in the cranium, where, however, the perforations of the bone are limited internally by a membrane susceptible of ossification, the dura mater. Contrary to

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what occurs in other affections of the bones, such of these lesions as are of syphilitic origin are with difficulty reparable by osseous tissue. Thus we see the central portion of the cicatrix, which is formed of a little vascular, whitish, compact mass, contract more and more, lower the natural arch of the cranium, and end by causing a depression more or less complete by virtue of a retractile property which we shall meet with again in cicatrices of the viscera. On the other hand, the peripheric bony parts undergo modifications of a different nature; they are affected, says Virchow, by sclerosis with hyperostosis. The medullary cavities become filled more and more with osseous matter, the bone becomes hard, thick, heavy, then entirely eburnated, and, on its surface, there rise small, smooth, or mammillated protuberances, which do not present either the volume or the porous character of those which are produced in such great abundance in mercurial or phosphoric necroses of the maxillary bones. The perforations of the palatine vault have sharp, smooth, hard edges, and are covered by a thick, whitish and little abundant cicatricial tissue. When there is question of persistent changes, as in syphilitic *ozæna*, the same modifications still supervene. The sunken nose is sustained by thick bones, which are frequently eburnated; instead of forming a roof, the bones of the nose converge, forming a deep hollow which takes the place of the normal ridge. The surface of this bone is traversed by numerous vascular furrows which affect a radiating form. This tendency to sclerosis and hyperostosis is not confined to the point first affected, but extends as far as the periphery, to the bones of the base of the skull for instance. If the necrosis does not involve the whole thickness of a bone, it leaves behind an irregular or cup-shaped depression, scarcely filled up by the regenerative tissue.

Such are, in the present state of our knowledge, the various anatomical modifications which the osseous system undergoes under the influence of syphilis. Despite certain desiderata, it must, nevertheless, be acknowledged that these lesions manifest themselves with characters which already disclose their origin and their nature. Osteitis and periostitis, gummy tumours, necrosis, bony cicatrices even, constitute so many changes each of which presents peculiar characters and a special stamp which we shall meet with again in most of the lesions which still remain to be studied. Osteitis and periostitis are, above all, adhesive. Gummy tumours are distinguished not only by their altogether specific characters, but also by

their evolution; tubercles of the bones, which might be thought to resemble them, occupy by preference the joints. Necrosis differs by its seat and by the peculiar nature of the sequestrum. Atrophy or dry caries is remarkable for a special seat, a certain tendency to unproductivity, and a slow evolution. The deformities which result from these lesions, those of the nose, for instance, have themselves an entirely peculiar and well-known stamp.

Such are the immediate manifestations of the syphilitic diathesis in the osseous system. But there are other lesions of the bones which, although their relation to syphilis is more remote, are nevertheless connected with that disease; such are the necrosis and caries which follow ulcers of the soft parts, gummy products in the neighbourhood of the bones, or even of the periosteum, &c. We shall point out these lesions without thinking it necessary to dwell upon the description of them.

There remains to be mentioned a lesion of the osseous tissue concerning the nature of which there is, as yet, great difference of opinion, but which, according to some authors, has, in certain cases at least, a syphilitic origin. I allude to *softening* of the bones. A. Paré* already clearly points out the existence of this change when he says that syphilis liquefies the bones as if they *were melted metal*. Morgagni quotes cases in point, and Portal† also alludes to the subject. Recently, says Simon, Marjolin related, in his lectures, a case of syphilitic softening of the mastoid apophysis.‡ But Swediaur and several other authors of equal note utterly deny the existence of syphilitic osteomalacia. We share the opinion of Swediaur and believe, like him, that there is no well-authenticated case to prove the actual existence of syphilitic softening of the bones. The cases related by Venot de Bourdeaux,§ and often quoted in support of such softening, are in reality very far from being conclusive. The information they really give us is, that certain portions of the osseous system may become modified by syphilis, and that a fracture may consequently result from the slightest violence, and nothing more. But this fracture, whatever may be its seat, whether the patella, the

* *Œuvr. complètes*, édit. Malgaigne, t. ii. p. 527.

† *Traité du rachitisme*. Paris, 1797.

‡ Thèse de Paris, p. 25, 1847.

§ *Accidents tertiaires de la syphilis, friabilité des os*. Bourdeaux, 1846, and *Gaz. médic. de Paris*, 1847.

clavicle, or the femur, is rather the effect of an entirely local change, of a gummy tumour for instance, than of a general modification of the osseous system, such as osteomalacia. We do not admit, therefore, that syphilis can produce any other softening of the bones than that which may be the consequence of one of the changes described above. In this matter we regret having to differ from Lagneau and Vallin; whose tendency is to believe, in such cases, in a softening having for its immediate cause an amyloid degeneration of the osseous system. Further on, we shall elucidate this point by proving that this degeneration has never any but an indirect relation to syphilis.

The symptoms proper to syphilitic affections of the bones vary according to the extent and nature of the anatomical lesions. They are subjective and objective.

Subjective symptoms.—Pain, one of the most important amongst these symptoms, deserves great attention. For, if it sometimes happens that its existence is observed independently of any appreciable lesion, it is none the less true that it is most frequently connected with a material lesion of the bones or fibrous tissues. This fact is proved, moreover, by a large number of post-mortem examinations which presented material changes in the dura mater, for example, or exostoses on the internal table of the bones of the skull, in cases in which, during life, the only symptom observed had been osteocopic pains.

These pains observed in the course of the various syphilitic changes of the bones, but most frequent in the first of the forms which we have admitted, are vague at their commencement, and sometimes the whole bony skeleton appears painful; they soon become localised in the neighbourhood of the diseased part, and especially in the long bones of the extremities and in the bones of the skull; they are deep-seated and the patients describe them as if starting from the marrow of the bones; they are acute, tearing, twisting, easily relieved by pressure, but sometimes aggravated by the slightest touch if there be osteitis or periostitis. These pains are, moreover, nocturnal, which is one of their most important characteristics, but to which, however, too much diagnostic value must not be attached. Usually erratic, slight, or null during the day, the pain becomes worse as night approaches, to cease at dawn and give place to sleep. The first hours of the night are the most terrible, on account, no doubt, of the increased temperature of the

parts under the influence of the heat of the bed. Ricord has observed, in fact, that patients who turn day into night and *vice versa* present pains the appearance of which is in relation to their habits. Nélaton even adds that patients suffering from osteocopic pains may, in travelling, become entirely free from them, provided they pass several nights without going to bed. Vidal, however, is not altogether of the same opinion; he says that persons affected with syphilis are seen who, wishing to keep awake, remain in the open air or drive about in carriages and who, nevertheless, suffer all the same when the fatal hour has struck, and just as if they were lying in a warm bed.

When they have their seat in the bones of the skull, which is most frequently the case, there are added to the insomnia by which they are accompanied, derangements of vision, vertigo and giddiness.

Objective symptoms.—These vary according as there is question of one or other of the pathological types mentioned above. An indistinct fulness, puffy at the circumference, is the peculiar characteristic of osteo-periostitis; painful on pressure, this fulness, when situated superficially, coexists with redness or even with a slight increase of temperature over a greater or less extent of skin. Resolution is its usual termination; it is rarely followed by suppuration. Pediculated or closely adherent to the skin, the exostoses which supervene under these circumstances are remarkable for their hardness, their bony consistence, their rounded or flattened shape, and their tendency to persist almost indefinitely unless specific treatment be employed.

Gummy tumours of the periosteum present themselves in the form of small rounded tumours, little painful, of a firm or somewhat soft consistence, and whose evolution does not differ notably from that of these products in the sub-cutaneous cellular tissue. After a certain time they soften, inflame and ulcerate the neighbouring tissues, and sometimes end by eating their way to the exterior, whence arise excavations and fistulous canals which take more or less time to cicatrise. When they are situated in the thickness of the bone, or in the medullary canal, these tumours do not offer at first any objective symptom. Violent pain is the only phenomenon which might lead to a suspicion of them; later on, if osteo-myelitis or necrosis supervene, the symptoms peculiar to those complications are observed. In the flat bones, and in the bones of the skull in par-

ticular, gummy tumours may, by separating the bony laminæ, cause protuberances and necroses which will facilitate the diagnosis. As we have already said, necrosis here proceeds from within to without ; in its train remain cicatrices or veritable excavations which persist indefinitely as evidences of the passage of syphilis. In the bones of the cranium, in which they have their usual seat, these cicatrices are deep, their edges are thick, indurated, wrinkled and uneven from the osteophytes by which they are surmounted. In the velum palati, it is sometimes a true perforation which succeeds the lesions in question.

Dry caries or inflammatory atrophy, characterised uniquely at first, in a symptomatic point of view, by osteocopic pains and by a slight prominence beneath the periosteum, presents later on depressions which gradually enlarge without giving rise to the elimination of any sequestrum.

To the symptoms just described, and which indicate a direct change in the osseous tissue, are to be added the various disturbances dependent upon the compression of, or secondary change in, the neighbouring organs. These disturbances are often the only indicative signs of the internal exostoses. Situated in the neighbourhood of the muscles, these bony tumours may interfere with their contraction, and with the regularity of the movements in an entire limb. Their action upon the vessels may produce œdema. Compressed by these tumours, the nerve-tubes may become changed and give rise to consecutive muscular atrophy,* to derangement of sensibility and to pains which must not be confounded with the specific pain which has for its starting-point the lesion of the bone itself. But the effects of compression are serious when the exostosis is situated upon the bones which enter into the formation of a cavity containing organs of great importance, such as the cranium or vertebral canal ; it is to be remarked, however, that those effects have been strangely exaggerated, and that, in consequence of this error, nervous disorders dependent upon an anatomical change in the nerve substance itself have too often been attributed to a change in the bones. It is rarely, in fact, that we see derangements of sensibility or movement, without special characters, result from a lesion of the bones.

Amaurosis, which is sometimes the consequence of an exostosis of

* Rodet, *Gaz. médic. de Lyon*, 1859.

the sphenoid, generally affects one eye only. Paralysis of the oculomotor muscles and exophthalmia indicate an exostosis in the orbital cavity. Although rare, exostoses in the vertebral canal become in their turn the starting-point of various disorders always in connection with the special function of the portion of the cord secondarily affected.

Course, duration, termination.—The general course of syphilitic affections of the osseous system is slow and progressive. Their duration is long, like that of most of the other manifestations of the same nature, the more so, it may be said, in proportion to the long standing of the disease. As regards the various phases through which these affections pass, and their mode of termination, we have said enough to make it unnecessary to revert to them again.

Diagnosis.—The preceding statement has shown how it is possible to distinguish from each other the various syphilitic lesions of the osseous system. It remains for us to distinguish these affections from all those which may simulate them.

Two symptoms, pain and swelling, belong to most of the syphilitic affections of the bones. To these symptoms is sometimes added disturbance of the functions of the organ nearest to the diseased bone. The combination of these symptoms, but above all their slow course, and the slight reaction which accompanies them: such are, with a knowledge of the morbid antecedents of the patient, the elements of the diagnosis of syphilitic osteo-periostitis. Syphilitic exostoses, unlike most of those which have a different origin, are preceded or accompanied by osteocopic pains; they occupy the more superficial bones; they are uniformly hemispherical, rarely multiple or symmetrical. By the aid of these characters they are distinguishable from osteogenic exostoses, which develop themselves in the period of the growth of the osseous system and which are always symmetrical,* from exostoses connected with the rheumatic diathesis, the seat of which is generally in the neighbourhood of the joints, and from traumatic exostoses, which increase, so to speak, indefinitely, and without causing excruciating pains.

The lesions situated in the more deep-seated portions of the bony tissue, gummy tumours of the medullary substance in particular, which for a long time betray their existence by deep-seated pains only, are sometimes difficult to recognise. It is possible, however,

* See Soulier, Thèse de Paris, 1864.

to diagnose them by taking into account the character of the pain and its paroxysms, and by referring to the antecedents of the patient. Necrosis and the phenomena of osteo-myelitis which sometimes supervene under these circumstances are other symptoms indicative of these affections. Certain modifications of the osseous tissue (fatty degeneration), dependent upon chronic intoxication with alcohol, may lead to confusion, but the pains in the bones in alcoholism are generally less intense than those of syphilis, and have for their seat, not the cranium but particularly the limbs. The syphilitic dyscrasia differs, moreover, by its various manifestations from the alcoholic dyscrasia. As regards the affections of the bones said to be produced by mercury,* it may suffice to say that they exist no more in patients who have been subjected to mercurial treatment than in the men who work in the mercury mines.

Prognosis.—In themselves, the syphilitic affections of the bones are not very serious, but when they come to interfere with the functions of important organs, such as the brain and the spinal marrow, they may produce effects which rapidly prove fatal. The suppuration which sometimes accompanies the elimination of sequestra is also not always without danger. A still more serious symptom of these affections is suppurating osteo-myelitis, which sometimes occurs as a complication of a gummy deposit in the osseous canal. Regarded in a more general point of view, the prognosis of these lesions is more serious, for, on the one hand, they indicate syphilis arrived at its third period, and, on the other hand, their coexistence with lesions of the viscera of a similar nature is by no means unfrequent.

B. SYPHILITIC CHONDROPATHIES.

Although hitherto but little studied, syphilitic lesions of the cartilages have, nevertheless, an undeniable existence and consequently cannot be passed over in silence. They do not attack all the cartilages indiscriminately, but those only which have a fibrous covering, analogous to the periosteum, and which is called perichondrium, as, for example, the cartilages of the larynx, which are, in some sort, their favourite seat. These cartilages, says Vidal, may be affected

* See L. Singer, *Wochenblatt der Zeitschr. der Wiener Aerzte*, 1857, No. 12; Pappenheim, *Handbuch der Sanitäts-Polizei*. Berlin, 1858, Vol. II. p. 5.

with necrosis, and the sequestra expelled in the efforts to expectorate. An immense service would be rendered to the patient if they could be extracted at an early period; for, acting as foreign bodies, they keep up irritation and suppuration and play a great part in the kind of laryngeal phthisis which then exists. (*Loc. cit.*, p. 497.)

I have seen a case in which the course of things was very similar. The purulent and gangrenous sanies, kept up in the larynx by the presence of fragments of cartilage much diseased, became the starting-point of an absorption which occasioned gangrenous metastases and death. I give here a summary of this case for the purpose, especially, of showing what may be the secondary effects of the syphilitic affection of the larynx.

Obs. XXI.—A young woman, æt. 32, infected with syphilis of long standing, had, for several months, observed her voice to become more and more changed. On examination, she was found to be tall, stout, well-grown, but in a state of extreme cachexia; there was pallor and discoloration with puffiness of the skin, and the muscles were soft and flaccid, &c. She presented all the symptoms of advanced disease of the larynx; aphonia, difficulty of breathing and swallowing, cough, expectoration, slight fulness about the upper part of the larynx, deformity, and *above all* a remarkable gangrenous odour of the breath.

Under these circumstances, she was suddenly seized with violent rigors which occurred twice within a few hours, and a week afterwards she sank under the phenomena of a septic infection.

Post-mortem examination.—The larynx was so much diseased that it was difficult to understand how she could have lived so long. The epiglottis remained, but the vocal cords were gone; there were no muscular insertions into the larynx, denuded and ossified fragments of which were found in the midst of a greenish magma and detritus of muscle. The trachea was of a greenish colour. There was œdema of the left lung, and several points of suppurative pneumonia with brownish ecchymoses and gangrenous foci in the right.—The heart was healthy.

On the surface of the peritoneum and in one of the ovaries were found several greenish spots having the colour and a little of the odour of gangrenous patches. The same change existed in the vicinity of the epiploic appendices in the true pelvis. The spleen was enlarged, granular-looking, rather soft and friable. The liver, of normal size, presented on its surface a deep cicatrix, elongated and extending from its free edge to the upper half of its anterior surface.—Kidneys healthy.—Brain intact.

In this case, the syphilitic perichondritis was probably the starting-point first of the necrosis and afterwards of the gangrene of the larynx, which, in its turn, produced a metastatic pneumonia, &c.; but, on the whole, the syphilis alone ought to be incriminated.

The costal cartilages appear to be susceptible of the same change. Bouisson states that he has seen a gummy tumour in the substance of the pectoralis major muscle in a man who had at the same time syphilitic perichondritis of the costal cartilages. The fibro-cartilages are, very probably, liable to the same change; but I am not aware of any observation in proof of the fact.

As regards the articular cartilages, they do not, in general, present any anatomical modifications unless the neighbouring tissues, the bones or synovial membranes are diseased. It is thus that, amongst the observations which follow, there is one in which these cartilages present an irregular, ulcerated surface at the same time that the tendons are the seat of gummy deposits.

C. TERTIARY SYPHILITIC ARTHROPATHIES.

Astruc, speaking of the lesions of the extremities of the bones and of hyperostoses, adds that ankylosis may be the consequence of these affections. Fabre* in like manner admits syphilitic ankylosis. Swediaur† says that the painful swelling of the joints and bones which is frequently assumed to be of a gouty or rheumatic nature, often proceeds from syphilitic infection.

Such was not, however, the opinion of Hunter, who never saw constitutional syphilis attack the joints. But one of his commentators, Babington, not only admits that syphilitic arthropathies may exist, but even points out that amongst these affections, some belong rather to the secondary and others to the tertiary period.‡ Ph. Boyer§ asserts that the fibrous capsules and ligaments which unite and surround the joints are often attacked by syphilitic inflammation; but the description which he gives is especially applicable to gonorrhœal arthritis.

In his clinical lectures, Chomel|| points out that syphilis may sometimes attack the ends as well as the bodies of the long bones; he admits a syphilitic arthropathy and even seeks to establish a differential diagnosis of it. According to that professor, syphilitic

* *Traite des maladies vénériennes*, 3^e édit. Paris, 1777.

† *Traité complet des maladies vénériennes*, trad. franç. Paris, 1801.

‡ See *Hunter's Complete Works*.

§ *Traité pratique de la syphilis*. Paris, 1836, p. 158.

|| *Leçons de clinique médicale. Rhumatisme et goutte*, par Requin. Paris, 1837, p. 31.

arthropathy is distinguished from chronic rheumatism by the limitation of the morbid action to some point of the joint, by the preservation of movement, and by its execution without appreciable pain. Ricord does not believe that the existence of syphilitic arthropathies is clearly established; at all events, he does not think that they have a single characteristic symptom.

Vague notions, without any facts in support of the assertions made, such is hitherto the history of syphilitic arthropathies. It was reserved for Dr. Richet to describe more clearly the lesions of the joints connected with syphilis. Relying upon three cases contained in a paper presented by him to the Academy, that learned surgeon admits two varieties of syphilitic white swellings:—1st. Articular synovitis. 2nd. Articular osteitis followed by synovitis, according as the synovial membrane or the extremity of the bone is affected primarily. Since that time, Follin,* in a remarkable chapter devoted to the study of syphilis, speaks of a patient in whom specific treatment was so successful in combating an articular affection of the knee, that a proposed surgical treatment became unnecessary. Added to the observations of Richet, this makes four cases of syphilitic white swelling. We do not know whether a greater number exists, but have been unable to discover any others in spite of the minutest researches for the purpose.

Traced by the aid of these facts, the history of syphilitic white swellings (tertiary arthropathies) was still deficient in anatomical verification. A case which we have recently had the opportunity of observing enables us to fill up this blank at the same time that it tends to complete the cases related by our predecessors.

Deep-seated ulcers arranged in a group on the left side of the neck.—Glandular affection a little below the fold of the right groin. Dyspnoea, cough; symptoms of pulmonary phthisis. Cachexia and death.—Ulcerations and contractions of the trachea and large bronchi.—Œdema of the lower extremities and ascites.—Deformation of the liver and multiple gummy tumours in the substance of that organ.—Hypertrophy of the spleen.—Changes in most of the visceral glands.—Inflammation in both ovaries.—Syphilitic arthritis in both knees.

ONS. XXII.—The widow D., laundress, entered the Hôtel-Dieu June

* *Traité de pathologie externe*, t. i. p. 714.

10th, 1863, under the care of Dr. Gueneau de Mussy. She is a pale, thin, cachectic woman, who has always had irregular menstruation and been subject to ophthalmia. In the region above the left clavicle are seen ulcers with regular edges, not perpendicular, a pale floor, scrofulous-looking. She has had inflammation of the sub-maxillary glands. The inner extremity of the left clavicle is enlarged; there exists a fulness in front of the sternum. The cervical glands are a little swelled; the hairy scalp is uneven in places and deprived of hair. In the right groin there is an elongated, rather deep, livid ulcer of long standing. The inguinal glands are moderately developed.

No information as to personal or hereditary antecedents. No evident traces of syphilis. The patient denies ever having had disease of the genital organs, neither does she believe that her husband was ever affected with venereal disease.

Although delicate, this woman states that she has never had any serious illness; she has usually no cough and has never spat blood.—For some months only her health has declined and she has grown very thin; about three weeks ago she began to cough and became hoarse; she has become more and more oppressed, has lost her appetite and sleep, and swallowing has become painful. She has had *cephalgia* for a considerable time, but not more severely by night than by day. At the time of her admission there was extreme oppression, the patient being unable to lie even upon her back.

No physical signs of tuberculisation. Intense general bronchitis, emphysema, enlarged liver.

Treatment.—Cauterisation of the larynx with a solution of nitrate of silver.—Blisters, emetics, opium, tonics.

While in the hospital, the patient's condition varied between better and worse, but ended by gradually becoming aggravated more and more: she had alternately diarrhoea and constipation, repeated vomiting, lost her sleep entirely, and the orthopnoea increased. During the last fifteen days symptoms of sub-acute peritonitis were observed. She sank at last under an attack of erysipelas of the face, in a state of complete exhaustion.*

Post-mortem examination.—*Forty hours after death.*

External appearance.—Dark lines in the course of the veins. Greenish discoloration of the skin at some points. Considerable œdema of the lower extremities; very little œdema of the abdominal parietes. At the upper part of the right thigh, ulceration and perforation of the skin; the edges of this perforation are thinned and mottled. Deeply seated in the cellular tissue was observed a gland which appeared to be

* All these details were furnished by M. Lemaire, a distinguished house-surgeon, and we have changed nothing in his report. The post-mortem examination was made by ourselves.

suppurating when laid open, but was really in a state of gummy degeneration.

At the upper and lateral part of the neck, behind the angle of the jaw are several ecchymatous-looking ulcers, in the neighbourhood of which the skin is mottled. In the cellular tissue, just below the jaw and in the median line is seen a gland about the size of a nut, which presents exactly the same change as that in the groin. No cicatrices on the skin, nor any trace of exostoses.

The *abdominal cavity* contained several quarts of a clear and yellowish serous fluid. The intestines looked as if soaked and were not adherent to each other. No change was apparent either in them, or in the stomach, œsophagus, or pharynx.

Palpation of the liver before opening the body had led to the diagnosis of a syphilitic lesion in it; it was, in fact, easy to ascertain that there existed on the surface of that organ numerous protuberances and that its lower edge presented the greatest irregularities. It was found adhering to the diaphragm by membranous bands, situated chiefly at its right edge and in some of the furrows which traverse its anterior surface. It was twenty-five centimeters in breadth by twenty in height; its general form was triangular rather than elliptical; its upper surface was traversed by very deep furrows, running some in a transverse others in an antero-posterior direction. Some of them were as much as two centimeters in depth, amongst others, a transverse one which divided the right lobe into two parts. Besides the eminences formed by these furrows, there are seen on the surface of the liver several hard, firm, white protuberances, formed by gummy tumours. In the whole of its posterior half, the inferior surface is composed of small projections the volume of which varies from that of a pea to that of a pigeon's-egg. The lobulus Spigelii is altered in shape. The anterior portal eminence is double the normal size, its surface is smooth, and it contains no gummy products. The edges of the organ are remarkable for their mammillated condition, and are all deformed; the thin edge, which is the most thickened, consists of five protuberances, of which two are on the left and three on the right lobe.

On making an antero-posterior incision, about the middle of the right lobe, a gummy tumour was observed which occupied at least three-fourths of the extent of that lobe. This straw-coloured, firm, elastic, fibrous-looking mass did not admit of penetration with the finger; it appeared to consist of four or five tumours agglomerated and enclosed in a retractile fibrous substance, beyond which they form projections. The surface of the incision presents, in the vicinity of the fibrous bands, orifices the rudiments of the hepatic veins. The whole gummy mass is surrounded by a thick, fibrous, pink or whitish capsule, in which were found some white gummy deposits of the size of a lentil or a pea. Another antero-posterior incision made about the middle of the left lobe of the organ, showed another gummy mass not differing from the preceding except in being traversed by several dilated hepatic ducts, more or less changed

and containing masses of the colouring matter of the bile. This mass, which consisted of a substance perfectly resembling that of the first tumour, appeared to be formed, like it, by the agglomeration of several nodules; it is similarly surrounded by a very thick and very resistant fibrous capsule, which separates it from the hepatic tissue. The surface of the section of these various tumours is not always smooth and uniform, small depressions are sometimes seen, as if empty spaces existed in the substance of them.

Besides these two large tumours, several other smaller masses (the size of a pea or pigeon's-egg) and equally surrounded by a fibrous capsule beyond which they project, were seen, chiefly upon the left lobe. Some, uneven on incision, are traversed by a hepatic duct; all are composed of a fibrous web in which are dispersed numerous nuclei, most of them round or elliptical, without any special arrangement, as stated by Wagner.

Apart from these gummy products, the substance of the liver, which was of a yellow tint or one resembling coffee with milk, were studded with reddish marblings; it was somewhat soft without being friable, and resembled in appearance a liver which had undergone fatty degeneration. The gall-bladder contained a calculus, the bile was thin and greenish.

The *spleen* was enlarged; the fibrous capsule, thickened and whitish, adhered at some points to the diaphragm. On incision, this capsule was seen to be prolonged into the parenchyma, which is, so to speak, carnified, rather firm but friable, of a brownish colour, studded with some blackish spots.

The *pancreas* was firm, shrivelled, and cirrhotic.

The *kidneys* were of normal size and easily separated from their fibrous capsules, except at some points where the cortical substance was easily torn. No sensible change was observable to the naked eye; examination with the microscope merely showed a few tubules in a state of desquamation.

Lymphatic glands.—Some of the sub-cutaneous lymphatic glands were the seat of changes. These occupied the sub-maxillary, sub-mental, and right inguinal regions. Two of these glands, of the size of a small pigeon's-egg, presented a yellow discoloration and cheesy consistency; they showed, on incision, the greatest analogy to gummy tumours, and were formed chiefly by hypergenesis of the elements of connective tissue.

The deep-seated or visceral glands were for the most part diseased. In the chest were found, in front of the pericardium and surrounded by a cushion of fat, two enlarged glands, somewhat soft, greyish, which presented on incision a medullary appearance. Other diseased ganglia were met with in several parts of the chest, amongst others in the neighbourhood of the roots of the lungs. In front of the vertebral column, and especially in the lumbar region, most of these organs were tripled or quadrupled in size, greyish, soft, having almost the same appearance as

those in the chest. The glands which accompany the iliac vessels presented the same change. The mesenteric glands were a little firmer; they were also enlarged and brownish or whitish.

The *ureters* and *bladder* were healthy.

The *uterus*, normal in structure, was of small size.

The *Fallopian tubes*, which were distended by a chocolate-coloured fluid, adhered to the ovaries. The latter were increased in size, hard, firm, resistant to the touch, and composed almost entirely of fibrous tissue. No Graafian vesicles were found in them but only some very small cysts and some brownish spots. Their external surface, which was slightly uneven, was occupied, at some points, by a yellowish granular substance.

The glands at the posterior part of the tongue were prominent, yellowish, and enlarged.

The *epiglottis* was a little thickened. The larynx was healthy, as was also the internal surface of the trachea for three centimeters and a half above its bifurcation. At that point the trachea was contracted, and presented deep ulcers which had destroyed the mucous membrane and attacked the cartilages. These ulcers were three in number; they occupied the lower part of the trachea and right bronchus; one of them, situated in the lower part of the trachea, was about one centimeter in extent; another, situated in the right bronchus, was nearly three centimeters in extent. A little further on was seen a gland which was the seat of a gummy deposit. The edges of these ulcers were soft, irregular, scalloped and fibrous; the cartilaginous rings were cleanly cut.

The left bronchus was more contracted than the right; it was less than two centimeters in diameter, while lower down it was four; the mucous membrane looked as if cicatrised and the cartilages were changed but not destroyed at this point.—All the ramifications of the bronchi were intact.

The apices of the lungs were healthy; the parenchyma of the base of the right lung was firmer than usual and slightly œdematous. Microscopical examination showed at this point, in addition to the normal tissue and numerous epithelial cells, a fibrous tissue of new formation (conjunctive hyperplasia).

A small quantity of blood was found in the heart and large vessels; there were no fibrinous clots; the proportion of the white globules appeared to be normal. The heart was small and atrophied; it measured only ten centimeters from its base to its apex. Its tissue was soft and friable.—The aorta was intact, with the exception of a few yellowish deposits of small extent. The common carotids were healthy, but the left external carotid presents, at the point of origin of the lingual artery, a membranous deposit which to a great extent obstructs it. This deposit was situated upon the internal coat; it was of a pinkish grey colour and formed of conjunctive tissue and a granular substance.

The muscles of the upper extremities were small and atrophied.

Both the *femoro-tibial articulations* were enlarged; each contained more

than a glassful of a yellowish, somewhat turbid serum. The synovial membranes, thickened and at the same time injected, were studded with several small pseudo-membranous deposits. On the left side, a yellowish false membrane united the two layers of synovial membrane; on the right side, the synovial bursa of the rectus anterior was not changed. The articular surface of the left external condyle was eroded and, as it were, ulcerated at one point. The articular cartilages of both patellæ were eroded or ulcerated; there was a velvety condition to half their extent, but these changes were secondary only, the chief lesion affecting the fibrous tissues of the joint. On the right side, a part of the ligamentum patellæ, the fatty cushion behind the synovial bursa, and all the fibrous tissues attached around the tibiæ are changed into a uniform, greyish yellow, elastic mass about an inch and a half thick at the median line. This mass resembled in many respects the morbid products met with in the liver, being, like them, formed by a gummy deposit. Except the fibrous band representing the ligamentum patellæ, there are found in it only some fibrous septa which appear to divide it into several small tumours. The left joint was similarly affected, except that the cushion of fat behind the patella had not disappeared so completely as on the opposite side. The fatty mass had retained its normal appearance at the upper part: an anatomical examination of the articular gummy masses showed a structure identical to that of the gummy tubercles in the liver.

Not less interesting in reference to the visceral lesions than to the changes in the joints, this case enables us to study anatomically an important variety of the syphilitic arthropathies, for, in presence of alopecia, cephalalgia, insomnia, and the totality of lesions observed, it is impossible, despite the absence of avowed syphilitic antecedents in the patient, to entertain the least doubt as to a specific origin. It shows us, at all events, that the sub-synovial cellular tissue and the fibrous tissue were here the seat of the neoplasm, which did not differ either in consistence or colour, any more than in histological composition, from the syphilitic products of the sub-cutaneous cellular tissue and from those which we shall soon meet with again in the viscera. Yellow, elastic masses, somewhat soft, dry, situated on each side of the ligamentum patellæ and in the space which separates that ligament from the synovial membrane, had atrophied and transformed a part of the cushion of fat; they were covered by the serous membrane in one part, and in the other part by a portion of the ligamentum patellæ which remained unchanged; on each side of that ligament they protruded beneath the fibrous or cellular membranes which pass in front of the joint. The synovial membrane was not sensibly diseased, but the cartilages

were secondarily eroded in several places and it is also, no doubt, in consequence of the secondary irritation of the synovial membrane that serous effusion into the joint took place.

In an anatomical point of view, this change is clearly distinguished from serofulous arthropathy, which has for its starting-point the synovial membrane, and is characterised by soft, fungous, and vascular masses; it differs also from rheumatic arthropathies, which never present deposits analogous to the gummy deposits.

The *symptoms* which correspond to the articular lesion in question are remarkable for their slight intensity and for the slowness of their evolution. The following case, which we watched for a long time, may give a very exact idea of them.

Chancere, iritis, exostoses, arthropathy of the left knee, gummy tumour situated on the antero-superior part of the trachea and probably in the thyroid.

ONS. XXIII.—B. G., æt. 42, was admitted into the Hôtel-Dieu, October 27th, 1863, under the care of Dr. Potain. This patient stated that his father had died of cholera in 1854, and his mother at the age of 72, after having always enjoyed good health; he has a brother who is healthy; as for himself, he has had no disease except that which has caused him to come into hospital.—He has been in the habit of drinking spirits largely.

At 19, he had gonorrhœa, followed by suppurating bubo. Since then, he has frequently had urethral discharges which were, perhaps, nothing more than relapses of the first. Five years ago, having had connection with a woman affected with syphilis, he observed, at the extremity of the glans, a chancre, which disappeared after some months of simple treatment. At present, a slight loss of substance is observable, with narrowing of the meatus.

Just at first, the syphilitic manifestations were absolutely null; no sore-throat, no cephalalgia, no alopecia, no mucous patches, no cutaneous eruptions. The patient, however, felt himself fatigued and devoid of energy, but had not lost his appetite.

A year or fifteen months after the appearance of the chancre, there was iritis of the right eye, with very severe pain, redness, and distention of the eye. This state of things continued during the whole winter of 1859. He was ordered *pommade de Lyon*, purgatives, and Leroy's plan of treatment. For six months the patient was treated by a homœopath, in consideration of the sum of fifty francs promised beforehand.

During the course of the iritis, two tubercles developed themselves, one on the right side of the neck, the other on the scapula of the same side.—These tubercles continued about a month, and terminated in suppuration.

At the points which they occupied were found two whitish depressed cicatrices, very similar to those of small-pox. Towards the end of the winter of 1859-1860 there appeared very painful exostoses upon the right frontal bone, the legs and fore-arms. Not obtaining any amelioration from various kinds of treatment, the patient went into the Hospital du Midi, December 5th, 1860. He was ordered belladonna ointment, atropine, iodide of potassium, and vapour baths.—The exostoses disappeared, and the condition of the eye was considerably improved when the patient went out, March 5th, 1861.

Four months after leaving the hospital, July, 1861, this patient was seized with articular pains, which ceased at the end of a fortnight under the influence of an appropriate treatment. During this attack he had profuse perspiration and an eruption, probably miliary.

In 1862, he quitted Paris for his native place. There he was seized in the month of September with sore-throat and pain and swelling in the left knee. The pain was more severe during the night; it was seated chiefly in the interior of the joint. The patient dragged his leg after him, but despite all these symptoms, committed frequent excesses in diet.—The treatment consisted of iodide of potassium internally and gargles with syrup of mulberries.—In the spring of 1863 all these symptoms disappeared.

The patient returned to Paris in the month of August, 1863. Soon after that time the pain in the knee returned, then the sore-throat, which was accompanied, this time, by difficulty of breathing, cough, and an abundant expectoration, with hoarseness and even, for some time, complete aphonia. Liquids swallowed returned partly by the nostrils.—After a month's treatment, the patient entered the Hôtel-Dieu, October 27th, 1863.—He was pale, with an expression of sadness and profound depression. He was hoarse, had pain and difficulty in swallowing, and smarting of the back of the throat, difficulty of breathing and oppression.—There was abundant serous expectoration with tracheal râles. At the lower part of the larynx, in the neighbourhood of the thyroid gland, there was a tumour the size of a large nut. Its lateral limits were easily ascertained, but it was not equally easy to isolate it completely at its base. It followed all the movements of the larynx. It was evidently a gummy tumour of the thyroid. The larynx was examined by Dr. Potain; the upper vocal cords were red, swollen, and separated from each other by only a slight interval.—One of the arytenoid cartilages, the right, was enlarged, turned downwards, presented a black spot, and was very probably carious.

The left knee was enlarged; in the neighbourhood of the patella it measured nearly sixteen inches, and there was some fluid beneath the patella.—The pains of which it was the seat were less acute than they were formerly, but walking had become very difficult. He was ordered iodide of potassium and quinine.

Under the influence of this treatment the throat improved; swallowing became easier, including that of the saliva, the smarting pains were less severe, the chest less depressed, the râles less loud, but the expectoration

continued very abundant, and he had nightmare frequently.—The knee was less painful and very slightly diminished in size, and his voice was much clearer.—The patient was in better spirits.

November 14th.—Voice almost natural, no more smarting pains in the back of the throat, swallowing easy. Oppression less, cough diminished in frequency, and râles less numerous.—The knee alone remains slightly swelled and painful.—The tumour in front of the larynx now does not exceed in size that of a small nut.—The patient was satisfied and considered himself almost cured, but on the 17th and 18th he complained afresh of a sensation of smarting in the back of the throat and of pains in the left knee, which were more violent by night than by day.

November 20th.—The patient caught cold in the night, the pains in the knees and legs continue. There is still a little weakness in walking. The perspirations continue.

November 28th.—The patient's strength is returning gradually, and the expectoration less abundant.—The pains in the knees are felt at long intervals. The one which was swelled has almost regained its normal size, and the tumour in the thyroid has almost entirely disappeared.

December 1st.—The patient is going on well, with the exception of an abundant perspiration which weakens him a little, the knee is normal, the pains in it are less frequent and more transient.—The condition of the throat is excellent, the tracheal tumour scarcely painful to the touch.

The patient went out, December 4th, to Vincennes. His condition was most satisfactory. A month after, I saw him again; he had given up all treatment, the hoarseness had partly returned, the left knee contained a very small quantity of fluid and measured about fifteen inches and a half in circumference.

Eight months after, this patient came to see me again. He was stout and scarcely recognisable. It is unnecessary to add that he did not present any functional derangement and that his general health was perfect.

In this case, as in those observed by Richet and Follin, the chief symptoms observed are: slight pains, sometimes with nocturnal exacerbations, a slow swelling of the joint, with effusion which is frequently intermittent, the sensation of soft elastic masses on the sides of the ligamentum patellæ, limited at one or more points to the vicinity of the synovial folds, and indurated and indolent patches analogous to foreign bodies. Let us add, in all these cases, the absence of febrile reaction and the preservation of most of the movements of the affected limb; for, if the patients do drag the leg or limp, they are seldom obliged to remain in bed. One circumstance is worthy of mention, viz.: that the knee-joint is, in some sort, the favourite seat of this tardy localisation. Sometimes

one knee only is affected, sometimes both knees are attacked at the same time. Other joints may, however, be invaded by the same pathological process, and it is generally the large joints rather than the small ones.

There are other lesions of the joints equally of a syphilitic nature, the starting-point of which is no longer the peri-articular cellulo-fibrous tissue, but the bones themselves which enter into the formation of the joint. In these cases, the swelling occupies a greater or less extent of the continuity of the bone, the acute, lancinating pain returns most severely in the night, and the limb is painful on pressure. In consequence of this change, a serous fluid, more or less thick, is sometimes effused into the cavity of the joint, and if the sub-serous tissue be affected simultaneously, we may observe, as Richet and Cullerier have done, hard, veritable foreign bodies, situated about the folds of the synovial membrane. The following case, which we owe to the kindness of M. Guérin, surgeon to the Hospital Saint-Louis, is a good instance of this latter form. We relate it as it was given us by M. Duguet at first, and afterwards by M. Lefevre, house-surgeons.

OBS. XXIV.—Joseph D., of Troyes, tinman, æt. 25, bed No. 40, Saint-Augustin's Ward, has hyarthrosis of the left knee. His mother died at 44, of a chest affection; she had had, in her youth, indolent tumours; his father, who had always enjoyed good health, died of apoplexy at 48. He is the youngest of four children, of whom only three are still living; his twin sister died at birth. The eldest brother is said to have had, when quite young, indolent tumours on the neck, and afterwards hyarthrosis of both knees resulting from his occupation. The second, who worked in copper, had his thigh broken. A fistula exists in his neck from which bits of bone come out from time to time; he coughs habitually.

D. was in good health until 17, when he sprained his left foot and had peri-articular abscesses which had to be opened fifteen times; at the end of seven months, the cure was almost complete, as there remained only a little stiffness of the joint, which afterwards diminished daily.

At 19 he had gonorrhœa, for which he came to Paris and went into the Hospital "du Midi," under the care of M. Ricord, who found, further, an indurated chancre situated at the upper part of the corona glandis. Inoculation from the chancre was made in the arm of the patient himself by M. Poisson, with a negative result; the sore was dressed with calomel, and mercurial treatment employed for two months: the inguinal glands have become enlarged and hard, without suppurating.—The gonorrhœa, treated with cubebs and injections of nitrate of silver, terminated in gleet.

There has been no roseola, according to the patient's account, but the hair has fallen off, and two years ago, in consequence of a blow on the

left leg, an elongated swelling occurred on the anterior and middle part of that leg, which was painful when touched and spontaneously so at night. At the same time, he had nocturnal pains in the left shoulder. Ten months ago, the pain invaded the left knee and was accompanied by evident swelling, with inability to bend or extend the limb completely, or to walk. For a month he attended at "la Charité," where he was treated for a hydarthrosis: not finding any improvement, he went in the month of January into the Hospital Saint-Louis, under the care of M. Guérin, where, on account of his pale and scrofulous appearance, he was put upon cod-liver oil and quinine wine; at the same time, tincture of iodine was applied to the knee and afterwards flying blisters. Sensibly relieved, but not cured, he was sent to Vincennes, where the same symptoms recurred on his attempting to walk. Flying blisters were again applied and, after staying two months at Vincennes, he again entered Saint-Louis, under the care of M. Guérin. March 22nd, that surgeon found that there was a return of the hydarthrosis; the raised patella caused a shock when struck, and the fluid entered the upper and lateral culs-de-sac of the synovial membrane, which it raised; any other position than semi-flexion was impossible. After some days of treatment without result by tincture of iodine and blisters, the idea that the hydarthrosis might well result from syphilis presented itself; the enlargement of the tibia was regarded as a periostosis, the nocturnal pains as specific; the nose was depressed and the velum palati destroyed, the left knee measured nearly $\frac{1}{2}$ of an inch more in circumference at the head of the tibia than the right knee.

June 22nd, he was ordered Vigo's plaster for the exostosis and iodide of potassium to the extent of fifteen grains daily, but colic and diarrhoea necessitated the suspension of this medicine on July 1st. On the 6th, the patient got up for the first time and walked. The iodide was administered again July 10th. D. continued to walk; the fluid in the knee was found to have disappeared entirely; the treatment had, however, to be suspended several times on account of colic and diarrhoea. Seven grains and a half of the iodide were better tolerated, and towards the end of September the patient was sent to Vincennes, walking very well, freed from his nocturnal pains, and with notable diminution though not complete disappearance of the exostosis upon the tibia.

June 25th, 1865, the patient came in again under the care of M. Guérin; the following is the report of his condition by M. Ch. Lefeuve.

A week before admission, after a violent effort, this man had felt, in the left elbow, an acute, persistent pain, to which was soon added swelling of the part. When we examined him, he could not perform any movement of flexion or extension of the fore-arm; the elbow was enlarged, tense, and painful on pressure; he presented, in a word, all the symptoms of acute arthritis.

Thanks to the well-known antecedents of the patient, it was not difficult to form a diagnosis and adopt a course of treatment suited to the nature of the disease. Fifteen and afterwards thirty grains of iodide of potassium were administered daily in a drink, at the same time that the local inflammation was treated by poultices. Swelling and pain diminished rapidly, and

the movements of the fore-arm were restored. As early as July 28th, the patient requested to be allowed to 'go out, finding himself sufficiently cured; but, as a little stiffness still remained and as it was thought desirable to continue his anti-syphilitic treatment, he was kept in the hospital until August 8th, 1865. He still presents the exostosis on the inner side of the tibia and the cicatrices of the throat.

To these two varieties of syphilitic arthropathy is it necessary to add a third, the starting-point of which would be the serous membrane? We think not. The sub-serous cellular tissue, rather than the synovial membrane is, in fact, the primary seat of the syphilitic arthropathies which do not result from a lesion of bone.

To conclude, let us say that gummy tumours in the neighbourhood of the joints have sometimes ended by penetrating the cavity of the joint. It is thus that Coulson * has seen a syphilitic tumour of the lower part of the thigh communicate with the knee-joint.

The slow evolution of syphilitic arthropathies renders their duration generally very long, but fortunately without much inconvenience to the patients. These affections, like all those which acknowledge the same origin, not having any tendency to suppuration, may sometimes be cured even when of long standing. Recovery is, moreover, their usual mode of termination, when they are recognised and treated; otherwise, they continue their evolution, without undergoing the least change from non-specific treatment; there is nothing to show that they have given rise to ankyloses or to irremediable changes in the joints.

Diagnosis and Prognosis.—Lesions of the joints connected with scrofula and chronic rheumatism, certain hyarthroses which excite only a slight febrile action; such are the affections which may be confounded with syphilitic arthropathies. But it should be remembered that in scrofulous white-swelling the enlargement is more rapid and more considerable; the swelled parts communicate to the finger the sensation of a kind of general puffiness, and not that of circumscribed and indurated patches; the joint affected soon loses its movements, and the affection frequently terminates in ankylosis. The articular lesions of chronic rheumatism soon present characteristic deformities, and are, moreover, more extensive than those of syphilis. In dry arthritis, a harsh and dry friction-sound is heard

* The *Lancet*, March, 1858.

during the movements of the joint. In short, simple hyarthroses do not, in general, show themselves in cachectic individuals and such as bear the stamp, so to speak, of a serious and deep-seated disease like syphilis. Gonorrhœal arthritis is distinguished by the concomitant circumstances, by the pain and swelling which accompany it, and by a certain tendency to suppuration.

Considered simply in reference to the articular lesion, the prognosis of tertiary syphilitic arthropathy is not unfavourable. Gummy deposits, which are always slow to destroy the fibrous tissues in the midst of which they develop themselves, do not usually entail serious derangements. This affection may, however, become more serious when the bones are primarily diseased; in any case, it does not generally cause ankylosis, and never renders amputation necessary like affections of scrofulous origin.

§ 2. *Lesions of the Muscles, Aponeuroses and Tendons.*

J. B. Theodosius, *Medicinales Epistolæ*, Basileæ, 1553, et *Aphrodisiacus* de Gruner, p. 140. Astruc, *Ouvrage cité*. De morbis venereis, &c., trad. franç. de Louis. Paris, 1777. *Petit-Radel*, Cours des maladies syphilitiques, t. ii. 1812. *Lagneau*, *Traité pratique des maladies syphilitiques*, 6^e édit. Paris, 1828. *Ph. Boyer*, *Traité pratique de la syphilis*. Paris, 1838. *Ricord*, *Clinique iconographique de l'Hôpital des vénériens*. Paris, 1851. *Gaz. des hôpitaux*, 1842, p. 98. *Bouisson*, Tumeurs syphilitiques des muscles. *Gaz. méd. de Paris*, 1846, et *Tribut à la chirurgie moderne*, t. i. p. 52, 1858. *Notta*, Sur la rétraction musculaire syphilitique, *Archiv. gén. de méd.*, décembre, 1856. *Nélaton*, Tumeurs syphilitiques musculaires. *Gaz. des hôpitaux*, No. 59, 1861. *Aug. Mazzuchelli*, Sur la syphilis musculaire, *Ann. univers.* clxxxvii. 4^e série, 41, p. 274.

A. SYPHILITIC MYOPATHIES.

Syphilitic affections of the muscles have already for a long time fixed the attention of observers. J. B. Theodosius, who was one of the first to point out their existence, recognises syphilitic muscular retraction and gummy tumours of the muscles. Astruc describes these manifestations in the following terms: "When the substance of the muscles," he says,* "is infiltrated with the poison, there supervene small hard tumours which, by intercepting or retarding the course of the blood, will cause pulsating rheumatic pain, with a manifest and inflammatory swelling."

* *Loc. cit.*, t. iv. p. 51.

Petit-Radel speaks of a retraction of muscle not amenable to the ordinary methods of cure.* Lagneau appears to have seen similar cases; he points out, in fact, amongst the symptoms of syphilis, chronic phlegmasiæ of the muscles of the extremities, which cause permanent flexions known by the designation of contractions.†

Ph. Boyer expresses himself as follows on this point: "It appears that consecutive syphilis affects the muscular system also, for I have twice seen contractions caused by it or at least accompanying the symptoms of it and referable to other causes. They occurred in the biceps and there was slight pronation and imperfect extension. One of the patients had ulcerating syphilide on the forehead; the other had exostoses on the tibiæ, several hyarthroses, periostosis of the metatarsus and metacarpus, and a cadaverous appearance.‡

In 1842, Ricord published in the *Gazette des Hôpitaux* several observations which called attention more closely to this subject; his *Iconographie* contains a plate which represents gummy tumours of the muscles.§ More recently Notta, and more than all, Professor Bouisson of Montpellier, have studied this interesting subject. The latter gives a minute description of the syphilitic tumours of the muscles.||

ANATOMICAL STUDY.

The lesions developed by syphilis in the substance of the muscles are characterised anatomically either by a diffused neoplastic infiltration or by the presence of nodosities more or less numerous and voluminous; hence two distinct pathological forms, analogous to those which we have already met with: in the one case, a diffused inflammatory lesion, *interstitial myositis*; in the other, a circumscribed lesion, *gummy myositis*.

Interstitial myositis.—Ricord regards hypertrophy and tumefaction of the muscle as the first stage of this affection.¶ By degrees, a peculiar plastic matter becomes deposited in the muscular tissue and destroys it; then supervene shortening, atrophy of the muscle,

* *Cours des malad. syph.*, t. ii. p. 78, 1812.

† *Traité pratique des malad. syph.*, 6^e édit., t. i. p. 145.

‡ *Traité pratique de la syphilis*, 1838, p. 167.

§ *Iconographie*, pl. xxviii. bis, fig. 1.

|| *Gaz. médic.*, 1846, p. 542.

¶ *Gazette des hôpitaux*, 1846, p. 1.

and finally fibrous, cartilaginous, and osseous degeneration. We have, therefore, swelling, then exudation of plastic lymph, or rather the appearance of nuclei and cells and, lastly, of new fibres of conjunctive tissue in the inter-fibrillary spaces of the muscles; later on, retraction of these elements, as happens in all cicatricial tissues, and shortening of the muscle, or deposition of calcareous elements in the substance of the neoplasm and ossification of the muscle. Virchow gives an almost identical description of this same lesion: "The muscular contractions have for their cause," says that observer, "callous degenerations of the muscular tissue, changes analogous to those produced by simple rheumatic or traumatic inflammation; in the interstitial tissue of the bundles of muscular fibres is developed a conjunctive tissue, which becomes sclerosed and destroys, after having atrophied it, the primary muscular fibril."* The anatomical modification in question consists, therefore, in a primary change in the interstitial tissue and a secondary lesion of the muscular element.

The surrounding aponeurosis sometimes partakes of this change. In a case of plastic degeneration of the tibialis posticus observed by Ricord, the aponeurosis of the muscles of the posterior portion of the leg was separated with difficulty, and when this was done, a lardaceous, yellowish tissue was observed, due to a change in the muscle and in the muscular fibre.

Gummy myositis.—This change differs from the preceding only by the mode of arrangement of the neoplasm. Instead of infiltrating a greater or less amount of the muscular mass, this neoplasm presents itself in the form of clearly circumscribed nodosities, having for their seat the conjunctive substance, or the fibrous network of the muscle. Bouisson, indeed, had already admitted this seat from mere analogy: "Analogy would lead us to believe," says that surgeon, "that the cellulo-sclerose element which unites the fleshy fibres or forms a sheath for them, is the first to be attacked. But when the lesion is advanced and has attained one of its modes of termination, whether by suppuration, or by induration, all the anatomical elements appear to be affected, and, according to the more or less advanced stage of the morbid process, the muscular fibre appear plunged in a matter of new formation, or they are

* *Archiv für pathologische Anatomie*, Vol. IV. p. 271, et la *Syphilis const.*, p. 105. Paris, 1860.

softened and destroyed, or else they are transformed into indurated, sub-cartilaginous, and even osseous tissue."

Gummy tumours of the muscles present most of the characters of similar tumours of the sub-cutaneous cellular tissue. They are, like the latter, sometimes encysted and always formed of the same elements, although often differing in volume and colour. Greyish at first, afterwards yellowish, they gradually acquire the size of a nut or walnut. Soft and viscons in the beginning, they sometimes retain this first consistence. At other times, firm, resembling hard œdema, they proceed towards an organisation more and more complete; if not, they soften gradually, and become fluctuating, so that they have been supposed at first sight to be in a state of suppuration, and the disaggregated elements mistaken for pus. This error has been shared by eminent men, amongst others by Professor Bouisson, of Montpellier; but it is very evident that that author mistook for suppuration, either a muscular lesion following a change in a neighbouring bone, or the remains of the fatty transformation of the plastic elements of gummy tumours. It is incorrect, then, to speak of suppurating gummy tumours: suppuration is not one of the facts of syphilis. In our opinion, the evolution of gummy tumours of the muscles is accomplished in two periods, one of formation (first stage of Bouisson), the other of regression or metamorphosis (second and third stage of the same author). In the first period, there is contribution of material and formation of a neoplasm; in the second, there is molecular destruction of new elements whose conditions of vitality are only temporary. Sometimes, however, a complete development of this neoplasm and its passage into a fibrous condition is observed, or even its incrustation with salts of lime, whence the osseous or ossiform state.

Seat.—No muscle is exempt from the lesions described above, but all are not affected with equal frequency. The observations of Ph. Boyer, Ricord, and Notta, teach us that interstitial myositis shows itself by preference in the muscles of the upper extremities and especially in the flexors of the fore-arm. Bouisson has seen this affection attack one of the oculo-motor muscles. He asserts, but wrongly we think, that most of the anal retractions observed in syphilitic patients are due to the same cause. As for gummy tumours, they appear to affect by preference the glutæus maximus, the trapezius, the sterno-mastoideus, and the vastus externus. Cer-

tain organs of an essentially muscular structure, such as the lips, the tongue, the velum palati, the muscles of the larynx, the heart even, sometimes participate in this change. We shall return to the syphilitic lesions of this latter organ when speaking of syphilis of the apparatus of circulation.

SYMPTOMATIC STUDY.

The two forms of syphilitic myositis have one symptom in common and symptoms proper to each.

The only symptom in common is pain, and even this appears to differ in the two forms. Thus, in gummy myositis, the pain is most felt at the moment of the contractions or after them; in interstitial myositis, it is situated almost exclusively in the neighbourhood of the tendinous attachments and may be caused by palpation of the diseased or contracted muscle. Muscular retraction is the most constant symptom of the diffused affection; if the biceps be diseased, the movements are limited, the fore-arm is in a state of permanent flexion, and the hard, tense muscle, diminished in length, projects during extension beneath the skin, which remains intact and retains its natural colour.

In gummy myositis the muscle affected sometimes retracts; but this retraction is no longer a necessary phenomenon. When the muscles are pretty superficial, palpation enables us to discover tumours which, rather firm and resistant in an early stage, generally soften by degrees, but which, in other cases, present a much firmer consistence, and acquire a bony hardness. The form of these tumours is usually globular, their size varies from that of a small nut to that of an orange. They are not accompanied by any change in the colour of the skin. According to Bouisson, variations of temperature and the hygrometric condition of the air sometimes affect their sensibility, which increases also during the night. A character which they possess in common with most tumours of the muscles consists in their mobility or fixity according as the muscle is at rest or contracted. It is during a state of mobility that the exploration of the tumour is most easy. Lastly, peculiar inconveniences, varying with each of the muscles affected, correspond to these affections.

The course of syphilitic myositis is generally slow and insidious, the patient often not noticing the existence of this affection until

long after its commencement. Usually, in fact, he mistakes for rheumatism the pains which sometimes accompany the first stage. Later on, when the gummy tumour has softened, both patient and physician willingly believe it to be an abscess.

Recovery is the rule, but it must be borne in mind that diffused infiltration may cause atrophy or destruction of a certain number of bundles of muscular fibres, and may even occasion a permanent contraction. We already know that the deep and sanious ulcers which succeed the tumours become cicatrised with difficulty; if we add that these ulcers sometimes cause perforation of the velum palati and interfere with its movements during speech, it will be understood that syphilitic affections of the muscles are not always without importance.

Diagnosis.—The diagnosis of syphilitic lesions of the muscles is not difficult if we take into account their course, the commemorative signs, and the concomitant changes. The exostoses, the gummy tumours of the periosteum, the ulcers of the pharynx or of the velum palati, are the manifestations which most frequently accompany them; but they sometimes coexist also with affections of the viscera which acknowledge the same origin. The cancers and abscesses which might be confounded with muscular syphilis, may be distinguished by the aid of the characters we have already pointed out, when treating of the diagnosis of gummy tumours of the sub-cutaneous cellular tissue.

B. SYPHILITIC LESIONS OF THE APONEUROSSES AND TENDONS.

In spite of their little vascular organisation, the aponeuroses and tendons do not escape the manifestations of constitutional syphilis. Adhesive syphilitic inflammation is, in fact, essentially peculiar to the fibrous tissues, whatever may be the degree of their vascularity. The lesions observed in these appendages of the muscular system do not differ notably from those which we have seen to exist in the substance of the muscles. They consist, in fact, either in a simple partial thickening (plastic infiltration, hyperplasm of the cellular elements), or in the presence of small tumours (nodes) or hard nuclei (gummy tumours) in the thickness of the membranous sheaths or of the tendons.

Known to Astruc* and to a great number of his predecessors,

* *Traité des maladies vénériennes*, t. iv. pp. 11 and 75.

syphilitic lesions of the fibrous membranes and of the tendons cannot be doubted, although the observations upon which a description of them has been based are, in general, very short and often incomplete.

We have seen above the modification of one of the aponeuroses of the muscles of the leg by means of a plastic substance with which it became infiltrated. A similar modification sometimes attacks other aponeuroses. These may also be the seat of gummy tumours, but more rarely than the tendons. Sometimes firm and solid, gummy tumours of the tendons appear to be produced by a circumscribed hypertrophy of the tissue (Bouisson); sometimes more soft and less consistent, they appear to depend upon the effusion of a gelatinous kind of matter. The tendon which contains them is scarcely injected or changed; if, nevertheless, ossification invades these products, it may attain the whole length of the fibrous cord; if not, it may remain limited to the part affected, and thus form a kind of accidental sesamoid bone.

These tumours develop themselves on the surface, or in the centre of the tendons. The former seat is the more frequent one. A projection more or less abrupt is observed in the course of the tendon, and when the retrograde metamorphosis supervenes, the continuity of the fibrous cord is not interfered with. When they occupy the centre of this cord itself, the products of new formation separate the tendinous fibres, and the tumour then assumes an ovoid or fusiform shape. Bouisson has observed and sketched such a tumour situated in one of the tendons of the flexors of the fingers; fluctuation was appreciable through the fibrous covering, and the tumour had almost the form and size of an almond. This author believes that the affection described by Lisfranc under the name of *white nodosities* is simply nothing else than a peculiar form of syphilitic node. The observation of Lisfranc* on this subject refers, as we know, to an opera dancer, who was the subject of a large tumour developed in the tendo Achillis, and who was cured by the administration of iodide of potassium.

The thickest and most resistant tendons are the most common seat of syphilitic lesions. In this respect, therefore, the tendo Achillis and tendons of the biceps and triceps are to be placed in the first rank.

* *Gazette des hôpitaux*, 1842.

Nélaton has met with two gummy tumours developed in the latter tendon, where they simulated foreign bodies in the knee. In another case observed in the practice of the same professor, the tumour, which occupied the anterior part of the thigh, had become the starting-point of a hyarthrosis which might easily have been mistaken for a white-swelling.*

Whether they affect the aponeuroses or the tendons, syphilitic lesions are little or not at all painful. When they occupy the tendons, however, they are, during the contractions of the muscles which correspond to the diseased tendons, the seat of a pain which is sometimes severe, and thus interfere more or less with the movements. Situated most frequently under the skin, these tendinous tumours are at first hard, small, and circumscribed; later on, when they soften, the skin becomes red, inflames, ulcerates, and becomes perforated to give passage to the dead gummy product. This is not pus, as I have pointed out already, and B. Bell† had observed the differences which distinguish it from the purulent fluid: "This thin matter, almost without colour, or slightly tinged with blood, has perhaps never any one of the characters of pus." The ulcers which are the result, adds the same author, are ill-conditioned and usually more difficult to heal than any of the others observed in this disease.

At a certain period of their evolution and when they begin to soften, syphilitic nodosities of the tendons are easily diagnosed; but the same is not the case in the first phase of their development. They may then be confounded with many other tumours, and especially with small tumours resulting from an accumulation of serum in the natural or accidental bursæ mucosæ, and to which the name of *ganglions* has been given. These latter lesions are reducible, and their evolution is very different from that of gummy tumours. Certain neuromas may also give rise to errors, but their somewhat different seat, and the pain which accompanies them, aid us in making the distinction.‡

* S. Arrzomann, Thèse de Paris, 1858.

† *De la gonorrhée virulente et de la maladie vénérienne*, t. ii. p. 187. Paris, 1862.

‡ Compare: Notta, *Recherche sur une affection particulière des gaines tendineuses de la main, caractérisée par le développement d'une nodosité sur le tendon des fléchisseurs des doigts*. *Arch. gén. de méd.*, t. xxiv. 4^e série, p. 142.

The prognosis of these affections is generally favourable, on account of the slight functional importance of the organs affected.

SYPHILITIC LESIONS OF THE FINGERS.—SYPHILITIC PANARIS.

Van Oordt, Thèse de Paris, 1859, pp. 41 and 45. Gommès des tendons. *Chassaignac*, De la dactylite syphilitique, Clinique européenne, p. 239, July 23, 1859. *Nélaton*, Du panaris syphilitique, *Gazette des hôpitaux*, Feb., 1860, extrait dans *Bullet. de thérapeutique*, t. lviii. p. 233. *Bergh*, Sur les lésions syphilitiques des ongles et le panaris syphilitique. *Hospital Tidende*, No. 13, 1860, traduit du danois dans *Behrend's Syphilidolog.* iii., 3, 1861.

The different tissues which enter into the composition of the fingers may be affected with syphilis together or separately, and thus opportunity is afforded for observing the various species of panaris admitted by authors. We need not speak again of onyxia, which has been described already. It will suffice to state that the skin of the fingers is exposed to the syphilitic manifestations of the whole cutaneous system, and consequently to multiple eruptions. The subcutaneous cellular tissue of the fingers is not, in this respect, less liable than that of other regions. Gummy tumours may become developed in it (gummy dactylitis). The tendon of one of the middle fingers was the seat of a gummy deposit in an observation (Obs. IV.) contained in the thesis of Van Oordt. There is no reason why the synovial membrane and the fibrous sheath of the tendons, or even the interosseous muscles should not undergo the syphilitic influence. As for the periosteum and the bone, they are not more exempt here than elsewhere, and periostitis of the fingers may even end in caries and especially in necrosis.

Most frequently, however, these various parts are affected at the same time, at least at a certain period, and then it becomes difficult to ascertain what has been the starting-point of the morbid process. The facts hitherto furnished on this subject induce us to give here, out of several others, an interesting case related by Professor Nélaton, in one of his clinical lectures. "A man fifty years old entered the clinical ward to be treated for an affection of the middle finger of the right hand. He stated that the disease had already reappeared twice; the finger became large and painful, then these symptoms gradually disappeared, and finally he was able to resume his work, although the finger continued to be somewhat large and painful; a relapse took place, followed by an apparent recovery, like the first

time; the following is the present condition of this patient. The middle finger of the right hand is larger than natural. It is about a centimeter more in circumference than the corresponding one of the other hand. This augmentation of volume occurs chiefly at the first phalanx, less at the second, and is almost null at the third. The integument, which is somewhat tense, has retained its natural appearance, or is slightly mottled. The movements are somewhat impeded, pressure causes some pain, but spontaneous pains supervene at various periods of the day and sometimes during the night." The same author gave at the same time another case which had great analogy with the preceding.

ARTICLE III.—GENITO-URINARY APPARATUS.

We have already pointed out the primary and secondary localisations of syphilis in the genital organs. The later changes in those organs in the male and female, the lesions of the urinary apparatus, will now be the object of our study.

§ 1. *Genital Organs of the Male.*

Astruc, Traité des maladies vénériennes, trad. franç. de Louis, 1777. *Benj. Bell*, Traité de la gonorrhée virulente, &c., trad. franç. de Bosquillon. Paris, 1802, t. ii. 190. *Dupuytren*, Leçons orales de clinique chirurgicale, t. i. Paris, 1832. *Ast. Cooper*, Diseases of the testis. London, 1835. *Hunter*, Complete works. *Hamilton*, Essay on syphilitic sarcocèle. Dublin, 1840. *Ph. Boyer*, Testicule syphilitique, *Gazette méd.*, 1840, p. 754. *Velpeau*, Dictionnaire en 30 volumes. *Ricord*, Clinique iconographique de l'hôpital des vénériens, et *Gazette des Hôpitaux*, 1845, p. 503. *John Hamilton*, Essay on syphilitic sarcocèle. Dublin, 1849. *Helot*, Mémoire sur le testicule syphilitique, *Journal de Chirurgie*, t. iv. 1846, p. 106. *Vidal (de Cassis)*, Du sarcocèle syphilitique, *Mémoires de la Société de Chirurgie*, 1851. *Nélaton*, *Gazette des Hôpitaux*, April 8, 1852, et *Annales des maladies de la peau*, t. iv. 218. *Calvo*, De l'albuginite syphilitique, &c. Thèse de Paris, 1854. *B. Curling*, Practical treatise on diseases of the testicle. *Venot*, Du sarcocèle syphilitique. Thèse de Paris, 1858. *Rollet*, Mémoire sur le sarcocèle fongueux syphilitique. Lyon, 1858. *Fossard*, De l'orchite tuberculeuse. Thèse de Paris, 1855. *M. Lebrun*, Du sarcocèle syphilitique. Thèse de Paris, 1855. *A. Lejeune*, Du sarcocèle syphilitique. Thèse de Paris, 1855. *Vidal (de Cassis)*, Du sarcocèle syphilitique, ses effets sur le testicule et sur la virilité. Mém. de la Société de Chirurgie, 1856. *Virchow*, Syphilis constit. trad. franç. Paris, 1859. *De Merie*, Fungus of the testicle in syphilis, *Lancet*, March 19, 1859. *J. F. West*, On syphilitic fungus of the testicle, in *Dublin Quarterly Journal of Med. Science*, November, 1859. *Ch. Hardy*, Étude

sur les inflammations du testicule. Thèse de Paris, 1860, pp. 48 and 49. *Hewin*, Studien über Hoden, Deutsche Klinik, No. 24, 1861, and *Canstatt's Jahresbericht*, 1861. *Bergh*, Om dem syphilit. Testikellid. *Hospit. Tidende*, Nos. 9, 11, 1861. *A. Dron*, De l'epididymite syphilitique, *Archiv. génér. de médecine*, 6^e série, t. ii., Nov. and Dec., 1863. *Fr. Tenore*, Il fango benigno del testicolo e la Sifilide costituzionale. Napoli, 1863, and *Ann. univers.*, t. 187 (4^e série, 41), p. 170. *Verneur*, Article *Aine* du *Dict. encyclopédique des Sciences médicales*, t. ii. p. 286.

A. SYPHILITIC AFFECTIONS OF THE TESTICLES AND EPIDIDYMES.

Pointed out by Astruc and already well described by B. Bell, the syphilitic affections of the testicles have been better studied by A. Cooper* and by Dupuytren; but it is really to Ricord, Vidal (de Cassis), Curling, and Professor Gosselin that we owe the most valuable works on this subject.

Like most syphilitic lesions, the changes in the testicle in syphilis show themselves under two distinct forms, one diffused, the other circumscribed; sometimes combined, at other times isolated and independent, each of these morbid forms calls, on the latter account, for a separate description.

ANATOMICAL STUDY.

Diffused form.—*Interstitial orchitis.*—Whether it invade part or the whole of the organ, diffused syphilitic orchitis, whether simple or double, is characterised, at its commencement, by vascular hyperemia and soon afterwards, by the appearance in the interstitial or connective tissue of numerous nuclei which are most frequently followed by fibres of conjunctive tissue. At this latter period, whitish septa, radiating bands of a tendinous appearance, starting from the thickened tunica albuginea, traverse a part or the whole of the thickness of the organ, insinuate themselves between the seminiferous canaliculi, and compress and separate them one from the other. Confounded at first with the neoplastic tissue, these canaliculi soon become atrophied, and then the epithelial cells which they contain, having become granular from the deposition of a blackish brown pigment, gradually undergo fatty metamorphosis

* A clear idea of the invariability of the anatomical characters of syphilitic lesions of the testicle may be acquired by comparing the plates left by A. Cooper with those contributed by Ricord. It will be impossible, after that examination, to fail to recognise the specific characters of the internal manifestations of syphilis.

and are destroyed. The testicle then becomes hard, resistant, and creaks under the scalpel; it no longer consists of anything, in fact, but the elements of connective tissue, with particles of fatty matter; it has undergone a true fibro-fatty transformation. Larger in general at the commencement of the pathological evolution, this organ diminishes in volume later on and gradually becomes smaller in proportion to the contraction of the neoplastic tissue. Hence results general atrophy, if the inflammation has been extensive, a depression resembling a cicatrix when the phlegmasia has been limited or merely lobular. Under these circumstances, the cord most frequently remains intact; sometimes, however, it has been seen blended so as to form only one mass with the testicle.

The tunica vaginalis most frequently participates in the affection of the testicle (periorchitis, vaginitis). At first it contains serum, which afterwards becomes absorbed when its two layers become studded with pseudo-membranous deposits which cause more or less extensive adhesions. Periorchitis isolated and independent of the change in the testicle is, at least, very rare, if it exist at all.

Simple, acute, non-specific inflammation of the testicle is almost the only lesion which can be confounded with syphilitic orchitis. It is to be distinguished by more considerable hyperæmia and friability, and especially by a much more rapid evolution, so that it does not occasion either the same thickening of the interstitial tissue or the atrophy which results therefrom. The inflammation which follows a gonorrhœa, or any other affection of the urethra, attacks, first of all, the spermatic cord and epididymis. I shall not attempt to distinguish syphilitic orchitis from chronic orchitis, of which the existence has not yet been clearly established. I think, with Professor Gosselin, that most of the known cases of chronic orchitis may well have had a syphilitic origin.

Circumscribed form.—*Gummy orchitis.*—This form frequently co-exists with the preceding, and to the characters pointed out above must then be added those of gummy tumours.* At other times, gummy tumours of the testicle develop themselves independently and have for their starting-point the external coat of a spermatic vessel or the membrane of a spermatic duct. They are, for the most part, multiple and dispersed at various points or grouped together at a single one. Of a

* The plates in Ricord's *Iconographie* furnish examples of this double change.

size varying from that of a lentil to that of a small nut, a walnut, or even an egg, these rounded or mammillated deposits, of a greyish or yellowish white colour, have a firm consistence becoming softer towards the centre; on section, they are dry rather than moist, that is to say they yield little or no fluid under the influence of pressure. Like most of the gummy tumours of the internal organs, gummy tumours of the testicle are surrounded from their commencement by a greyish areola, traversed by vessels visible to the naked eye; later on, they are enveloped in a kind of whitish fibrous capsule, from which it is sometimes difficult to separate them.

The histological structure of these tumours is not always perfectly identical, at least as regards the form of their constituent elements; whilst some are almost entirely fibrous, others, on the contrary, are composed almost exclusively of nuclei or of cells. In one case, I could find only changed and imperfect elements, abundant fatty granulations, and crystals of fatty matter (*margarine*). These products pass through the various phases which every gummy tumour undergoes, and retrograde degeneration is generally more advanced in proportion as the more central parts are examined, whence the possibility, in certain cases, of distinguishing in these tumours three distinct zones by the degree of change in the elements.

If it may happen that only one testicle is diseased, sometimes both organs are affected simultaneously. The body of the testicle is the usual seat of the syphilitic deposits; the epididymis and the spermatic cord, in all the cases in which it was possible to make an anatomical examination, were in general affected only from an extension of the disease in the testicle.

The epididymis and spermatic cord are, however, in some rare cases, more seriously affected by syphilis than the testicle itself. A case of the kind is at this very moment under my own observation. A patient forty years old was affected at the age of 32 with a tumour of the scrotum, which was opened with the bistoury and which was cured by the administration of iodide of potassium. The testicle afterwards became affected, and when this patient presented himself to me, June 13th, 1867,* this organ was of the size of an adult's fist and formed a mass of which one part, situated above and to the right, was softer; this was the body of the testicle itself,

* This and some other dates belong to additional matter furnished by the author for the English translation.—TRANSL.

while the other part, which was knobby, firm, of great and everywhere equal hardness, consisted of the epididymis and adjacent portion of the testicle. The spermatic cord formed a hard, rigid rod as big as a finger, enlarged at several points, and one of which enlargements, situated near the arch of Fallopius, was of the size of a large chestnut. The patient stated that this lesion began to develop itself five years ago and that, for about a year, it had been the seat of shooting pains. He did not know exactly at what period he had had a chancre, but remembered having been treated with iodide of potassium eight years ago. The testicle of the opposite side is intact, and his general health is good, with the exception of habitual cephalalgia, insomnia, and emaciation. He was ordered to take fifteen grains of iodide of potassium daily. On the 1st of July, the dose of this medicine was doubled. August 13th, after two months of this treatment, his general health was perfect, the cephalalgia had long ceased, the testicle had got free of the epididymis, the size of which was diminished by nearly one-half, and the cord was also smaller, but still hard and firm. The patient still continues under treatment and is also taking cod-liver oil, upon which he is fattening visibly. In October and November, however, he neglected himself and on December 1st, the local condition not having become much changed during the last two months, I again ordered him iodide of potassium in solution, to the extent, this time, of forty-five grains daily. Twenty days after, there was a decrease in the size of the tumour; on the 8th of January, this diminution was more marked, and now, on the 29th, I have every reason to anticipate a rapid and effectual cure. In fact, the testicle is entirely disengaged from the epididymis, which still retains a part of its hardness but no longer exceeds a chestnut in size. The spermatic cord is more supple and reduced in size to that of a quill, and the nodules which it presented are now scarcely appreciable. As to his general health, it is excellent. Here ends my observation, upon which I would make the following reflections. In presence of so interesting a lesion of the testicle, and especially of the epididymis and cord, which latter extended into the abdomen, my first idea was that of a cancerous or tubercular lesion, but the long duration of the affection, its hardness, and the comparatively good health of the patient were so many circumstances little favourable to either of these diagnoses, and it was then that I thought of syphilis, which was indicated, moreover, by the presence of the cicatrix of the scrotum

and by the existence of the cephalalgia and insomnia. After exchanging a few words with the patient, I no longer had any hesitation; I concluded in favour of a syphilitic lesion and commenced the treatment which proved perfectly successful.

The seat of the affection serves to distinguish gummy tumours from tubercle properly so-called, which usually develops itself in the substance of the epididymis; but with this latter coexists, generally, small miliary greyish tubercles (tubercular granulations). Moreover, the evolution of these products is not identical; tubercle softens more rapidly, causes inflammation of the neighbouring tissues, adheres to the skin, and becomes the seat of more or less numerous fistulous openings. Cancer produced by hypergenesis of the elements of conjunctive tissue is a vascular product and differs, therefore, in an anatomical point of view from gummy tumours. When, on the contrary, the cancerous neoplasm is formed of epithelial cells, its constituent elements distinguish it clearly from any of the products of syphilis.

Amongst other examples of gummy affections of the testicles we give the following, in which those organs, more voluminous than in the normal state, consisted almost entirely of a homogeneous yellowish substance somewhat analogous to the yolk of an egg boiled hard. On the periphery of this mass with an uneven depressed surface, it was difficult, in fact, to discover any traces of the tunica albuginea; that membrane, which had undergone a transformation identical to that of the rest of the organ, was in no way distinct from it.

Syphilitic symptoms treated at the Hôpital du Midi.—Gummy tumours and ulcers of the leg; syphilitic sarcocele; cachexia.—Death and post-mortem examination; multiple gummy tumours of the liver; lesions of the visceral glands; interstitial orchitis and gummy tumours of the testicles.

Obs. XXV.—D., a tailor, æt. 45, was treated for a long time at the Hôpital du Midi, under M. Cullerier, for a syphilitic affection. April 5th, 1862, he entered the Hôpital de la Pitié, under the care of M. Michon. He was a tall thin man, with every appearance of a cachectic condition, namely: discoloration and yellowish tint of the skin, œdema of the lower extremities, softness and flaccidity of the tissues, almost entire loss of appetite, and diarrhœa. He was extremely weak, and wished rather to be enabled to regain strength than to be treated for a large gangrenous-looking ulcer on the anterior and inferior part of the right leg, which appeared to have resulted from an old and softened gummy tumour. The weakness of this patient increasing more and more, he died in a few days

in a state of the most complete marasmus (April 25th), without having presented any other symptoms than those already mentioned.

Post-mortem examination.—The hair had scarcely fallen off at all; several teeth were carious; the epidermic layer was everywhere thin and slightly desquamating; a large ulcer about two inches in diameter, sanious and greenish, existed on the lower part of the right leg. The glans presented on its anterior and inferior portion a loss of substance and a cicatrix which had produced hypospadias. Moreover, there were observed some white and irregular cicatrices of the skin on the anterior portion of the chest and several crusts of ecthyma on the right shoulder. There were no bony or muscular tumours.

The brain was healthy, but pale and discoloured. The arachnoid, thickened and greyish in the neighbourhood of the bulb, adhered closely to the brain substance. There was false membrane to a slight extent on the inner surface of the dura mater, in the neighbourhood of the falx cerebri. The bones were intact.

Thoracic cavity.—The pericardium contained a small quantity of serum. The heart, which was large and soft, was seen to be covered with a thin layer of fat, and had a white milky-looking patch upon it. It was almost bloodless, but a few ecchymosed spots were observed upon it. The mitral valve was a little thickened; the tissue of the heart was unchanged.

There were numerous patches of ecchymosis upon the pleura, and especially upon the diaphragmatic portion of it. There were no adhesions, but slight sero-sanguineous effusion into the left pleural cavity. There were numerous adhesions of the right lung to the parietes of the chest, but the lung itself was healthy. The left lung, at its posterior portion, was the seat of a brownish induration due to pneumonia with sanguineous infiltration.

Abdominal cavity.—The liver, increased in volume, projected beyond the false ribs; its antero-posterior diameter was twenty-two centimeters, its transverse diameter thirty-two centimeters. This organ adhered at several points to the neighbouring parts and more particularly to the diaphragm, by means of elongated and whitish false membranes. In the vicinity of each of these adhesions there existed, either a depression more or less deep and partly filled up by fibrous tissue, or a small rounded, whitish tumour, the size of a large pea, or of a nut. The tumours seen on the surface of the liver were enveloped in a whitish fibrous tissue above the level of which they project. Rather abundant and disseminated regularly on the convex surface of the liver, these small tumours were much more rare on the concave surface of that organ. Several were met with at the right edge, one of which gave rise to an evident hollowing out at that part. A fibrous web, in which rounded nuclei and numerous fatty granulations are seen, such is the constitution of the tumours in question.

In the greyish tissue which surrounded these tumours there existed only rounded or elliptical nuclei and fibres of connective tissue. The hepatic cells in the vicinity of the tumours were filled with fat and changed

in form, but in the other portions of the liver were in an almost normal condition.

It was easy to ascertain that these tumours had been, for the most part, developed about the circumference of one of the bile ducts. At their centre, in fact, was seen a yellow or greenish spot, due to the presence of the colouring matter of the bile, and which marked the position of such a duct. The nodules were of a whitish colour and pretty firm consistence; some of them, which were softer, were at the same time yellower. On section of the organ, several small greyish points were seen, towards which fibrous sulci converged; thus the same retractile tissue which was seen on the surface of the organ enveloping the gummy tumours was met with again in the interior, where it appeared to indicate the existence of previous tumours at these various points. The colour of the parenchyma of the liver was yellowish, in consequence of the existence of numerous fatty granulations contained in the hepatic cells themselves. At several points where no tumours existed, some dilated ducts were observed, with thickened walls, and containing in their interior a greenish colouring matter.

The spleen, increased in size, was covered with milky patches. The abdominal glands were enlarged, of a greyish red or purple colour, softer than in the normal condition and without doubt diseased. The kidneys were pale and colourless, but otherwise healthy. The bladder was healthy. The intestinal canal was intact, with the exception of a small but deep ulcer at the junction of the ileum with the rectum.

Both the testicles were diseased. Palpation showed the left testicle to be increased in volume, and the sensation afforded by it was that of a firm pyriform body, slightly uneven and everywhere equally resistant. On the right, its volume was but little changed, but indurated and elastic points were felt, which appeared to have for their seat the tunica albuginea. An anatomical examination of these organs revealed, on the left, a close adhesion of the two layers of the tunica vaginalis. The visceral layer, the tunica albuginea, and the substance of the testicle were confounded with each other and formed a yellow, elastic, little friable mass of a uniform consistence; this mass, which was of the size of a large hen's-egg, and presented several dents upon its anterior surface, consisted entirely of a new product in which no spermatie ducts were found. In the vicinity of the epididymis, however, the tunica albuginea was still distinguishable from the subjacent substance; the tunica vaginalis was found to be thickened and lined with a vascular false membrane. There was no effusion. The substance which took the place of this testicle, pretty analogous to the yolk of an egg boiled hard, was composed of a fibroid matter, of nuclei, and of cells studded with granulations. There were found in it numerous collections of crystals of fat (*margarine*) and abundant fatty granulations.

On arriving, by dissection, on the right side beneath the parietal layer of the tunica vaginalis, there was observed a vascularity and, further, a thickening connected, in a great measure, with the adhesions which

united the two layers ; these adhesions were numerous, and between them was found effused a small quantity of serum. The tunica albuginea was thickened, as well as the septa emanating from it ; here and there were seen small yellowish tumours more or less soft ; the substance of the testicle presented a yellowish colouring matter disposed in lines running in the direction of the spermatic ducts, a great number of the latter containing changed epithelial cells and fatty granulations. In the soft and yellowish portions, drops of oil and fatty granulations were abundant ; even some crystals of cholesterine were found.

Without speaking here of the alteration in the liver, to which we shall have occasion to revert, there is reason to believe that it is in cases of this kind and in consequence of the invasion of the tunica vaginalis by the gummy product that we meet with those *sypilitic fungous affections* of the testicle which have recently attracted the especial attention of observers. It is easy to understand how this product, when it undergoes softening, may inflame, ulcerate and even perforate the scrotum, whence its appearance externally and the symptom described under the name of Fungus. This process, consequently, differs in nothing from that which we have pointed out in reference to gummy tumours of the sub-cutaneous cellular tissue. It is wrong, in our opinion, to attribute this condition to suppuration of the sypilitic product. It is very evident that in such cases the glandular elements which had remained intact, being imbedded in the gummy deposit, soon become changed, and that the organ is always seriously compromised.

SYMPTOMATIC STUDY.

The sypilitic manifestations of the testicles (orchitis, gummy tumours) have an insidious commencement ; it is rarely that their existence is betrayed by violent pain, so that the patient frequently only becomes aware of their presence by accident or by the inconvenience which results from the increase in volume of the organ affected. The latter, in fact, gradually increases in size, becomes heavier, hard, and firm to the touch ; it is uneven and indurated when the gummy tumours have their seat upon the surface, or when thick false membranes occupy the tunica vaginalis. Under these conditions, a certain amount of pulling applied to the cord sometimes produces lumbar or abdominal pains and, according to A. Cooper, the testicle itself may be the seat of pain of slight intensity, which becomes aggravated during the night.

The tenderness on pressure, if it does happen to increase at first, lessens as the disease proceeds, and the testicle may become entirely free from pain. The scrotum retains its natural colour and suppleness, except in the rare cases of fungus; the cord and the epididymis, which generally continue intact, are set, the latter at least, in the mass of the testicle. After a certain time, the organ affected forms, in fact, a mass which is usually pyriform, comparatively heavy, smooth or most frequently studded with small inequalities; in one of my own cases, it communicated the sensation of an agglomeration of large tumours, indented, rounded, and elastic; at other times, it is as if enclosed in a firm and resistant shell; these are so many differences which pathological anatomy renders perfectly intelligible. The hydrocele which not uncommonly accompanies the commencement of the affection is generally little abundant, and is afterwards absorbed by the false membranes when once formed. Contrary to the opinion of Curling, it has appeared to us that both testicles usually participate in this change, whether they be affected simultaneously or successively.

There is little or no venereal desire. The functions of generation gradually become weakened; erection occurs with more and more difficulty; the secretion of semen diminishes or may cease entirely, if both testicles are diseased, and hence the impotence and sterility so frequently connected with the existence of syphilitic orchitis. It suffices, however, that one of the organs should remain healthy to prevent any appreciable disturbance of the generative functions, as Professor Gosselin has very justly pointed out.

The fungus which results from syphilitic orchitis presents itself in the form of a tumour which is generally regular in shape, of a consistence everywhere equal, having somewhat the appearance of the head of a mushroom. The surface of this tumour is granular, and it secretes a laudable and healthy pus. The skin surrounding it is perfectly free and intact, and the corresponding inguinal glands are healthy.

Syphilitic orchopathy sometimes shows itself within a year after the primary infection, and then it may coexist with certain precocious eruptions, iritis, and periostitis; or it supervenes at a late period, *i.e.*, three, five, or even ten years after the primary lesion, and simultaneously with the affections of the viscera. At each of these two periods, the affection in question differs somewhat as to its seat, its course, and the readiness with which it yields to remedies. In

general, the earlier it occurs after the first infection, the more rapid a resolution occurs and the more does it show a tendency to invade the secondary period. But it is to be true that this portion of the spermatic gland is more generally affected in the tertiary period, the same does not being good for the secondary period. Some authors think, in fact, that syphilis may occasion in the epididymis changes entirely independent of those in the testicle, and admit as a parallel to a chancre of the epididymis of the same nature. Dr. Dron* has strongly asserted upon this point. After having collated the records of syphilis occurring in, he relates a number of cases sufficiently imposing to leave no further doubt as to the existence of "chancre of the epididymis." One of the first facts resulting from these observations is that the change in question usually attacks both epididymes at the same time and that its most usual seat is in the middle of the glands proper. Another not less important fact is the presence of the appearance of this lesion of the epididymes in relation to the various manifestations of syphilis. But the researches in question also establish it to be on an average three months and a half after the primary chancre that this change shows itself, at the same time that there is no previous superficial eruptions.

There is found in the portion of the epididymis a firm, resistant, solid mass and indurated tumour in apposition with the testicle without ever overlapping it, and thus distinct from the seminal gland. Being small in the start, it often remains unperceived by the patient, and after continuing generally for a considerable time, ends by resolution without having interfered with the functions of the organ affected.

Syphilitic testicles, an affection always slow in its evolution, and of which the duration sometimes exceeds a year, undergoes various phases of which the last may be various transformation and atrophy of the diseased organ.

Calcareous transformation in this affection, although possible, has not yet been demonstrated by any well authenticated case. As for suppuration, every thing leads us to believe that a syphilitic testicle is not more liable thereto than the other organs. This opinion, which is held by Professor Gosselin, Ricord, and ourselves, has the advantage of being based upon numerous cases. The destruction

* *De l'épididymite syphilitique* (Archives de médecine, 1863).

of the testicle is far from being a constant phenomenon, and Curling thinks that syphilitic orchitis usually becomes cured. At all events, the functions may remain if an appropriate treatment be adopted sufficiently early, *i.e.*, before complete atrophy of the spermatic ducts. Gosselin was enabled to ascertain that the semen then regained its normal qualities.

Gummy tumours generally end in resolution, leaving behind them a more or less radical change in the testicle; if not, their rapid softening gives rise to foci which ulcerate the neighbouring parts, whence ensues a simple fungus, as has been shown by the observations of Rollet, Gosselin, and several other observers.

Diagnosis.—The affections with which it is possible to confound syphilitic sarcocele are numerous; gonorrhœal orchitis and all those forms of orchitis which have the canal of the urethra for their starting-point, are distinguished by the circumstance that they are preceded by inflammation of the urethra and that they commence by a change in the spermatic cord and epididymis. Acute spontaneous or traumatic orchitis is recognised by severe pain and swelling of the testicle, with redness of the scrotum. Non-specific chronic orchitis is more difficult to distinguish; but, as has already been remarked, the cases which have served to illustrate this latter affection have probably, in the majority, at least been dependent upon an overlooked syphilitic affection. However this may be, the tendency to affect both testicles, the resistance to suppuration, a foregone syphilitic infection, such are the circumstances which plead in favour of syphilitic sarcocele. Lancinating pains, a rapid increase in volume, projecting and irregular dents which soon soften, and a consecutive change in the scrotum and lumbar glands, are the signs which characterise cancer of the testicles and distinguish it from syphilitic orchitis. Tubercular disease of the testicles generally commences in the epididymis, does not invade the whole mass of the gland, speedily becomes adherent to the scrotum, modifies its normal condition, and finally causes abscesses which are soon followed by fistulous openings, which never occurs in syphilitic sarcocele. Moreover, hydrocele is very rare in the tubercular affection, which is further most frequently accompanied by an analogous lesion of the prostate and of the vesiculæ seminales.

Prognosis.—As regards itself, the syphilitic affection of the testicle is not dangerous, as it in no way compromises the existence of the individual and most commonly yields to appropriate treatment. In

some cases, however, it becomes serious to a certain extent on account of its long duration, of the possibility of a fibrous or even calcareous transformation, and of the destruction of the secreting elements, conditions in which the function of generation is permanently lost. Like most of the syphilitic affections, orchitis also is subject to relapses.

B. SYPHILITIC AFFECTIONS OF THE VASA DEFERENTIA, THE VESICULÆ SEMINALES AND THE PROSTATE.

These various parts but rarely become the seat of syphilitic affections; we know already that in syphilitic orchitis the spermatic cord generally remains intact and that this state of integrity of the vas deferens is even a diagnostic sign. This canal is, nevertheless, sometimes injured by extension of the disease of the testicle; but, except in such cases, it may be asserted that syphilis does not usually affect in a direct manner the vasa efferentia of the spermatic secretion. Verneuil met with a gummy tumour of the cord which, at the time of its greatest development, formed a diseased mass twice the size of a fist. Hard, lardaceous, and extending as far as the iliac fossa, this tumour, which was the seat of dull pains with exacerbations, had been taken at first for a cancer. A similar product occupied the anterior wall of the right auricle.* Besides this case, several observations of inguinal syphilitic tumours exist (Ricord, Sarrhos, Azam), and I have myself had an opportunity of seeing one, but there was nothing to prove that the cord participated in the change.

The vesiculæ seminales appear little subject to the influence of syphilis, at least there has been no case as yet to show that those reservoirs have ever been affected specifically. Does the same hold good for the prostate? It is difficult to tell; I think not, however, on account of the existence, in one of the cases to be given further on, of a change in that gland to which it would scarcely be possible to attribute any other than a syphilitic origin. There is reason to believe at least that amongst the many tumours of which the prostate is the seat, some may well result from syphilis. J. L. Petit † supported the view which attributes a syphilitic origin to a

* *Bull. de la Société anat.*, 2^me série, t. i. p. 12, 1856; et *Dict. encyclop.* t. ii. p. 236.

† *Œuvres complètes*. Paris, 1844.

certain number of prostatic tumours; but, like most of the authors who preceded or followed him,* confounding gonorrhœa with syphilis, he included under the name of syphilitic obstruction the gonorrhœal affections of that gland. This remark, which has already been made by Bérard,† appears to us to be perfectly exact; the error once pointed out, it will be easy in future to assign to syphilis and to gonorrhœa their respective parts in the affections of the prostate.

§ 2. *Genital Organs of the Female.*

A. SYPHILITIC AFFECTIONS OF THE OVARIES.

Not less important and perhaps not less frequent than the affections of the testicles, the syphilitic lesions of the ovaries have attracted so little attention that a great many physicians still doubt the possible action of syphilis on those organs. Astruc‡ speaks, however, of tophus, schirrhus, and ovarian tumours; but what he says on that subject is so vague and marked with the theories of his day as to be unworthy of much attention. After Astruc, Dr. Richet is perhaps the only author who mentions these changes; when speaking of tumours of the breast, he remarks that amongst them are found some upon which, so far as he knows, no author has insisted, and which occur under the influence of the syphilitic diathesis: he calls them syphilitic tumours of the breast, analogous to those of the same name met with in the testicle and which he had also observed in some cases in the ovary.§ In a thesis presented in 1858 to the Faculty of Paris, the following passage, of which we have not been able to find the original text, occurs:—"There was read on the 29th of June, 1858, before the Anatomical Society, the case of a young girl, æt. 12 (under the care of M. Blache at the Children's Hospital), who presented gummy tumours of both ovaries, recognised as such with the aid of the microscope, as well as another situated in the sub-cutaneous cellular tissue of the hairy scalp."|| But this short

* See André, *Dissertation*, &c., p. 46. Swediaur, *loc. cit.*

† *Maladies de la prostate*. Thèse de concours. Paris, 1857.

‡ *Loc. cit.*, t. iv. p. 103.

§ *Traité d'anatomie chirurg.* Paris, 1857.

|| Thévenet, *Étude sur les tumeurs gommeuses du tissu cellulaire et des muscles*. Thèse de Paris, p. 30, 1858.

note leaves, at least, room for doubt concerning the nature of the change in the ovary. These are the only data which we possess for a knowledge of the syphilitic affections of the ovaries; their history has still, therefore, to be written. Their relative frequency is quite unknown, but the ovaries, from their fibrous structure, would appear to be especially predisposed to syphilitic lesions. Such of these lesions as are known to us have, moreover, the greatest analogy to those of the testicles, and there is ground for recognising in them the same anatomical forms, the diffused and the circumscribed. The diffused form, or syphilitic ovaritis, has only come before us in the atrophic period, but it presents so close a resemblance to syphilitic orchitis that we may fairly assume that it follows the same evolution, viz.: at the commencement, multiplication of the elements of conjunctive tissue and augmentation in size of the organ; later on, organisation or complete development of those elements, fibrous thickening,* induration; then, by degrees, retraction and atrophy; this is, at least, what appears to have been indicated by several of our cases, in which, in women not yet arrived at the age at which menstruation ceases, we have found the ovaries of the usual size or smaller, but entirely fibrous, sometimes studded with cicatrices and

* In an unmarried woman, æt. 33, who had had syphilis, and who died in the Hospital de la Pitié, I found this kind of change. She entered the hospital February 4th, 1860. She had had symptoms of constitutional syphilis ten years before. On admission, she had facial hemiplegia of the left side and paralysis of the external motor oculi; she complained of violent nocturnal pains in the head and in the tibia. For these she had already taken iodide of potassium with success. At present, the same medicine to the extent of 22½ grains, has failed. The patient died after having had vomiting and slight delirium.

On examination after death, there were no traces of cicatrices on the skin, nor anything unusual about the bones of the cranium, or the meninges; the Pacchionian glands were numerous and developed. The brain was of almost normal consistence, the ventricles somewhat dilated, but nothing abnormal was seen in the neighbourhood of the facial and external motor oculi nerves.

In the true pelvis were adhesions between the ovary, the uterus, and the neighbouring parts; the peritoneal cul-de-sac contained a small quantity of pus; the kidneys and ureters were covered with a layer of pus.

One of the ovaries, enlarged in size, was the seat of a white induration disposed in patches, the greater portion of it being manifestly diseased, and adhering to the Fallopian tube and neighbouring parts. The neck of the uterus was inflected towards the anterior part of the body.

no longer containing any Graafian vesicles. The gummy form of ovarian syphilis presents the closest analogy to gummy orchitis. The enlarged ovary contains a soft, dry, yellowish mass, which clearly betrays its specific origin. A case communicated by Dr. Lécorché to the Biological Society suggests the idea that these products are susceptible of becoming calcified. "On the surface of the fibrous covering of each ovary are observed," says our colleague and friend, "numerous calcareous deposits which effervesce with nitric acid and which have formed, doubtless, under the influence of frequently repeated inflammations." This occurred in the case of a woman suffering from cachexia and presenting a papular syphilide in the frontal region. In the lungs were found three masses, which were regarded as tubercular, but which we should be tempted to look upon rather as gummy tumours.

SYMPTOMATIC STUDY.

The symptoms which accompany the lesions in question attract but little attention and, except in cases of post-mortem examination, most frequently pass unperceived. A dull, little intense pain sometimes appears to constitute the only symptom of ovarian syphilis; but a derangement more common and at the same time very difficult to establish, is the abolition of the function of reproduction. Loss of sexual desire and sterility appear, in fact, to be a necessary consequence of the anatomical derangements which we have just described, provided always that both ovaries be affected. On account of their position, these organs are little accessible to our means of investigation, but it is nevertheless possible, in certain cases, to ascertain an evident increase in their size by means of palpation of the abdomen and an examination per vaginam combined.

In a patient 43 years of age whom I saw in 1859, when I had the honour of being clerk to Professor Langier, there existed, simultaneously with osteocopic pains in the cranium, two tumours of the size of an egg, situated in the region of the ovaries and elongated in the direction of the broad ligament. Iodide of potassium ordered by the learned teacher, on the hypothesis of a syphilitic affection of the ovaries, produced a rapid decrease in the size of these tumours, and after twenty days of this treatment, when the patient asked to be allowed to go out, it was ascertained that one of them, that on the left side, had disappeared, for it was no longer discoverable by pal-

pation. A fall upon the abdomen was, according to this patient, the cause of the development of these products.

Diagnosis and prognosis.—The diagnosis of ovarian syphilis is difficult ; it rests, apart from the disturbance or abolition of the function of generation, upon the antecedents of the patient, the concomitance of syphilitic symptoms, the cachectic condition, and, in certain cases, upon the presence of one or two tumours in the region of the ovaries, and the rapid modification which may result from specific treatment. The prognosis is favourable as regards the individual ; it has no importance except as regarded in reference to the species.

B. SYPHILITIC AFFECTIONS OF THE FALLOPIAN TUBES, THE UTERUS, AND THE VAGINA.

P. Maynard, in *Aphrod. Luisin.*, p. 392. *Gosselin*, *Archiv. générales de médecine*, t. ii. p. 145, 1848. *Robert*, *Affection du col utérin*. Thèse de concours, Paris, 1848, pp. 37 and 38. *Bernutz*, *Des affections syphilitiques de l'utérus*, Mémoire lu à la Société Médicale des hôpitaux, 1855. *Stan. Rossignol*, *Aperçu médical sur la maison de Saint-Lazare*. Thèse de Paris, 1856. *McClintock*, *Sur les tumeurs des lèvres, du clitoris et du vagin*. *Schmidt's Jahrb.* t. cxix. p. 56. *M. Venot*, *Du chancre de l'utérus*, *Journal de Bordeaux*, 8^e série, viii. p. 554. *Sigmund*, *Syphilis an dem Scheidentheile der Gebärmutter* ; *Spital Zeitung*, 8 et 9, 1863.

No mention is made in any case, so far as I know, of a syphilitic change in the Fallopian tubes, but it is easy to understand the possibility of the action of syphilis upon these carriers of the ova. Various syphilitic manifestations belong to the uterus. *Gosselin*, *Robert*, *Bernutz*, and *Rossignol*, have studied carefully the primary lesions and secondary syphilitic localisations of the neck of the uterus. But, side by side with these affections of which we have not now to speak, may not the uterus, like most of the internal organs, undergo the influence of syphilis arrived at its most advanced period? In reality, although I do not possess any case from my own experience, I do not think, nevertheless, that there can be any doubt on this point. In his celebrated *Traité des maladies vénériennes*, *Astruc* no more forgets the diseases of the uterus than those of the other viscera, and after having spoken of the ulcers of the uterus, he points out the venereal schirrhous which often degenerates into cancer and gradually produces pain, twitchings, and ulceration. What does that author mean thereby? It is difficult to state

this precisely: with the hypothesis of a cancerous induration, it must be admitted that the change pointed out by Astruc has no relation to syphilis; but in the opposite case, it might well have some connection with that disease, and it would be possible to adopt the idea of one of those gummy products which are not, moreover, very rare in the viscera.

After Astruc, little attention was paid to the tertiary syphilitic affections of the uterus. Dr. Whitehead* asserts that the uterus may become the seat of special lesions resulting from the *lues venerea*. These are:—1st, Hypertrophy, with or without induration, occupying first the inferior segment of the uterus, and extending to a more or less considerable portion or to the whole of that organ; 2nd, erythema, presenting a dark red surface, smooth or studded with white projections, known by the name of follicular hypertrophies; 3rd, excoriations; 4th, aphthous ulcerations; 5th, endometritis; warty excrescences. These lesions, admitting that they may be connected with syphilis, which is far from being proved, would belong in any case rather to the earlier periods than to the last; but nothing leads to the belief that the generality of them have a syphilitic origin, it might even be said that the reverse is the fact.

There are cases, however, in which well-informed physicians, having suspected a tertiary lesion of the uterus, have had their diagnosis justified by the good effects of a specific treatment.

In a patient who had had three syphilitic and scrofulous children, a hard and mammillated enlargement of the neck of the uterus was found, which dilated the upper part of the vagina; its smooth surface presented a depression near the left commissure of the os tincæ. At this point, which was more tender to the touch, an ulcer appeared to exist. The patient would not allow an examination with the speculum. There was a constant discharge from the vulva of a yellowish and sometimes bloody fluid of disagreeable smell. In addition to constant pains in the kidneys, and a burning sensation in the lower part of the pelvis, lancinating pains recurred at short intervals, and in the night suddenly awoke the patient when, overcome by fatigue and suffering, she sought a few moments of repose. Under the influence of frictions with calomel ointment at the inner part of the thighs, the neck of the uterus regained its usual size in less than three months and menstruation was restored.

* *De la transmission des parents aux enfants de quelques formes de maladies.* London, 1857. Analyse dans *Archives génér. de méd.* t. ii. p. 375, 1857.

There was a relapse ; the existence of an ulcerated schirrhous of the neck of the uterus might have been suspected, so extensive and hard was the enlargement, so large and deep the ulceration. However, thanks to a knowledge of the venereal antecedents of her husband, the same means which in the first instance had produced good effects having been employed and supplemented by sudorific drinks and pills of bichloride of mercury, the cure took place so quickly and completely that, after six years, there had been no further relapse.*

Madame E., æt. 50, who has usually had good health, has had no children during twelve years that she has been married a second time, and that in spite of her second husband having had children by his first wife. By her first husband, this lady had three children, who are all dead, the first at the end of three years, with pimples on his body ; the second at eighteen months with convulsions ; the third only fifteen days. She does not remember ever having had the least symptom of syphilis, but thinks that her first husband, who died young from excesses, had some disease of that nature. Madame E. dates the commencement of her sufferings six months back ; she began to feel pains in the loins and weakness in the legs ; then gradually she experienced pains more and more acute in the thighs, followed by constipation and pain on passing her motions ; a discharge of considerable amount of a yellowish green matter, which stained her linen, appeared some months later. The colour of her skin is a highly cahectic yellow ; her thin face expresses suffering, her eyes are sunken and glazed ; there is great emaciation and almost entire loss of appetite ; her nights are bad, she cannot lie on her back without fatigue, and frequent dreams interrupt her sleep. At the end of the vagina is felt a mass of about the size of the head of a foetus of seven months ; this mass, which is hard rather than soft and somewhat knobby, presents no point of softening or fluctuation. It moves freely in the pelvis, compressing at once the rectum and the bladder. It does not appear to be ulcerated at any point. It forms a tumour without any definite form, and it is with difficulty that there is felt in the middle of it a slight hiatus which may be assumed to represent the os tincæ. Palpation by the abdomen gives the sensation of a hard, rounded body extending three fingers' breadth above the pubis. Examination with the speculum teaches nothing, there being no ulceration.

The diagnosis remained doubtful ; Professor Velpeau, being consulted, ordered iodide of potassium internally and friction on the abdomen with iodide of lead ointment. Twenty-five days later, the patient was better and a gummy periostosis was found on the anterior surface of the left tibia. The uterine tumour had diminished in size by nearly one-half ; the finger could easily be passed round it ; the neck of the uterus was distinguishable, and gave to the finger the sensation of an almost healthy body, in place of the hardness which had existed previously.

It was under these circumstances that M. Velpeau again saw the patient, and that, supposing he had to do with a syphilitic affection, he

* Duparcque, *Maladies de la matrice*, p. 133. Paris.

ordered her to take night and morning a pill with gr. 0.15 of corrosive sublimate, &c.

Six weeks later, the uterus presented to the touch its normal appearance and usual consistence; no knobs were found on it, and there were no longer any pains in the loins, the thighs, or the abdomen. The tumour of the leg had also disappeared, leaving behind it a small oblong elevation, indurated and entirely painless, even on pressure. Madame E. has completely regained her strength, she has a fresh colour, a good appetite, and is as stout as usual.*

These facts, though few in number, lead to the belief that the uterus, like most of the internal organs, is susceptible of being affected during the course of tertiary syphilis. The change of which this organ may be the seat has not, it is true, been established *de visu*; but it is probable, if we take into account the sensations furnished to the touch, that it does not differ from that which we meet with everywhere else. Thus it would be interstitial inflammation producing an induration of greater or less extent, or the specific product to which we give the name of gummy tumour, which would here constitute the uterine lesion.

Would it not be possible to explain the rarity of these lesions by the facility with which they may be confounded with the most ordinary changes in the uterus and with fibrous tumours in particular? Examination of the whole patient and of the whole disease would here be of the greatest importance for the anatomical and clinical determination of the affection in question. The course, very different, moreover, of cancerous and syphilitic lesions would certainly end by clearing up the diagnosis, if this remained obscure.

Already rarely affected in the primary and secondary periods, the vagina becomes still less diseased in the tertiary period of syphilis. Hitherto, at least, we know few changes in this canal to which a syphilitic origin could with certainty be assigned. The canal may, however, be the seat of gummy tumours, of ulcerations more or less deep, which, on cicatrising, are capable of producing a greater or less amount of contraction. If we find in modern works few facts to support this view, it may at least be said that it is possible to meet with some in ancient authors. The following case is not without interest, despite its age. "*Mulierem etiam vidimus*" (says Ant. Benevenius) "*cui morbus quem vulgo gallicum appellant, totam*

* Montanier, *Gazette des hôpitaux*, 1862, p. 450.

vulvam eroderat, et incuria medici, quicquid erosum fuerat, oris invicem junctis obcalluit. Indeque sola urina, et ea parvo quidem foramine reddebatur. Huic nos (propterea quod callus ipse altior esset, quam ut citra mortis discrimen incidi posse æstimaremus), consulimus, ut incurata potius vivere, quam tanto se periculo exponere vellet.”* This latter lesion, which may become an obstacle to delivery, is further, like those which affect the uterus and the ovaries, capable of producing a symptom already pointed out by Astruc.† This symptom with many causes, which is sterility, is observed, moreover, not unfrequently in the course of syphilis; but side by side with it, there is another with which it is not less important to be acquainted, viz., abortion. This last effect of syphilis, most frequently inherent in the fœtus, will be spoken of further on. Let us state here that it is not clearly shown to be dependent, sometimes, upon a simple lesion of the placenta or the uterus. In fact, there are found in Wilks’ work ‡ a small number of cases leading to the belief that syphilis is not without action upon the placenta, and although mention is made in these cases of the existence of false membranes producing a thickening of the chorion, there is nothing to prove that it is really that lesion which was the veritable cause of the abortion, and there is every reason to believe that, in those cases as in many others, the death of the fœtus has been the consequence of hereditary syphilis. This is a point, however, which we shall discuss elsewhere.

§ 3. *Urinary organs in both sexes.*

A. SYPHILITIC AFFECTIONS OF THE CANAL OF THE URETHRA, OF THE BLADDER, AND OF THE URETERS.

A certain analogy of structure appears to indicate that the canal of the urethra may, through the influence of syphilis, present changes analogous to those which are observed in the trachea or in the alimentary canal. But, on this point, observation has served to confirm the hypothesis advanced, by showing in the urinary canals and in the air-tubes very analogous anatomical derangements.

“The ulcerations and cicatrices of the canal of the urethra are

* *De abditis morb. causis*, Obs. XXXI. p. 235, et *Aphrodis.*, p. 85, du supplément.

† *Traité des maladies vénériennes*, t. iv. pp. 15 and 104.

‡ *On the syphilitic affections of internal organs*, p. 60.

very well known," says Virchow; "they have exactly the same character as those of the larynx. I have sometimes met with these lesions in the urethra of the female, and I have described in detail* the case of a person in whom the ulceration had extended to the bladder and become cicatrised." Our facts do not, unfortunately, enable us either to confirm or to refute the assertions of the Berlin Professor. The study of the tertiary syphilitic lesions of the mucous membrane or the sub-mucous tissue of the organs in question calls, in any case, for more complete researches. In reference to affections of the corpora cavernosa, we possess somewhat more extensive data. "Sometimes," says Ricord, "in a patient in the third period of syphilis, it happens that a small hard point shows itself in one or both of the corpora cavernosa. Some day, without having been warned by any pain, by any appreciable phenomenon, the patient feels, in the substance of the penis, a small induration of the size of a millet-seed. By degrees this induration increases in size, advancing sometimes on one side only, sometimes on both, not occupying any one point of the corpora cavernosa in preference to others: thus, it is met with as frequently above as below or laterally. The disease progresses slowly without any pain; but in proportion as the induration extends, the penis begins to deviate from the straight line, and the result is that, if the induration be situated laterally in one corpus cavernosum only, the erectile tissue loses its permeability at the point indurated; when the patient has an erection, the corpus cavernosum of the sound side only becomes distended, that of the diseased side retaining the dimensions of the flaccid state, and the penis describes a curved line with a lateral concavity; the patient has an erection which might be called inguino-crural, the extremity of the penis being directed towards the fold of the groin. If the seat of the induration be the dorsum of the penis, the latter is curved upwards and backwards, the glans being brought into proximity with the symphysis pubis. We have seen all the varieties of the disease here described, and have met with some cases in which the penis formed a complete ring."

Syphilitic affections of the bladder, if they exist, as there is good reason to believe they do, are as yet but little known. Follin † showed to the Biological Society the bladder of a woman upon the

* *Würzburger Verhandlungen*, Vol. III. p. 366.

† *Gazette médicale*, p. 492, 1849.

mucons membrane of which there were a dozen small tumours the size of a lentil, raised about $\frac{1}{8}$ of an inch above the surface of the bladder and offering a great resemblance to the mucous tubercles observed upon the labia majora of the vulva. The syphilitic character of these tubercles appeared the more probable inasmuch as the woman in whom they were met with had the velum palati and palatine vault destroyed by a venereal affection. But, besides the circumstance that the resemblance here in question evidently does not suffice to establish a syphilitic origin, mucous tubercles do not usually coexist with tertiary affections, such as perforation of the palatine vault. Neither do we think that a certain thickening of the vesical parietes, mentioned in Observation VII. of Virchow's work, is to be regarded as a syphilitic lesion, any more than in those other cases in which there exists at the same time an ulcer in the urethra and a cicatrix in the bladder. Hypertrophy and atrophy of the vesical parietes are also lesions mentioned in a certain number of cases; but it is by no means proved that they are to be attributed to syphilis.

Syphilitic lesions of the ureters and their pelves have not as yet been observed, and although there may be reason to believe that certain cases of hydronephrosis may have a syphilitic origin, it must be admitted that facts are yet wanting to establish this view with certainty.

B. SYPHILITIC AFFECTIONS OF THE KIDNEYS.

Rayer, Traité des maladies des reins. Paris, 1840. *Thourenel*, *Gazette des hôpitaux*, No. 74, 1858. *Jaksch und Ffinger*, *Deutsche Klinik*, 1850. *Frerichs*, Die Brightschen Nierenkrankheiten und deren Behandlung. Braunschweig, 1851. *Virchow*, La syphilis constitutionnelle, trad. franç. Paris, 1859. *Tüngel*, Mittheilungen, &c. Hamburg, 1861. *Bazin*, Leçons sur les syphilides, p. 23. *Lancereaux*, Études sur les lésions viscérales susceptibles d'être rattachées à la syphilis constitutionnelle. *Gazette hebdomadaire*, 1864. *Cornil*, Mémoire sur les lésions anatomiques du rein dans l'albuminurie. Thèse de Paris, 1864.

The authors of the last century, and Astruc himself, so prodigal in reference to syphilitic visceral manifestations, pass over in silence the lesions of the kidneys, probably because they misunderstood the semeiotic value of albuminuria. To one of our most eminent teachers belongs the honour of having been the first to point out

these lesions. "It is not easy," says Rayet,* "to appreciate thoroughly the influence which constitutional syphilis may exercise upon the development of albuminous nephritis; for it is very rarely that we see this latter disease in individuals affected with constitutional syphilis who have not been subjected to the action of other causes the influence of which upon the development of the disease in the kidneys cannot be disputed. I have seen cases, however, in which the influence of the venereal constitutional affection has appeared to me so striking that I have not hesitated to attribute, at least in a great measure, the development of the disease in the kidneys to the venereal cachexia."

Already, before this, the English physicians, Wells, Blackall, and Gregory, had observed in the course of the venereal disease changes of a similar kind; but, far from connecting the renal affection with constitutional syphilis, they attributed it to the action of mercury employed for the treatment of that disease. Rayet justly opposed to this view the circumstance that the urine rarely becomes albuminous from the effect of mercurial preparations when employed against the primary symptoms of the venereal disease; that it is still more rare to observe dropsies with coagulable urine in gilders suffering from mercurial tremor or from other diseases dependent upon mercury. He refrains, however, from forming too exclusive an opinion; he regards it as probable that, in a certain number of cases, the affection of the kidneys and the dropsy are the simultaneous or successive result of several causes.†

Thouvenel, Jaksch and Finger, have met with several cases of albuminuria in syphilitic subjects. Engel calculates that out of sixteen cases of Bright's disease, there is inveterate syphilis in six. Frerichs, who makes this statement, asks himself whether constitutional syphilis contributes to the development of Bright's disease as cachexia after the manner of profuse suppurations, or rather whether, as a dyscrasia, it occasions exudations in the kidneys, as it does in the bones and liver. This latter causality does not appear proved to that author; he admits, however, that individuals affected with syphilis frequently have albuminuria. The problem to be solved in such cases is complex and often embarrassing. In certain cases, it is true, all the phenomena of albuminuria are seen to develop them-

* *Traité des maladies des reins*, t. ii. p. 485, 1840.

† *Loc. cit.*, p. 486.

selves in persons who are, or have been under the influence of venereal disease, without there being any direct or, at least, clearly established connection between the general affection and the albuminuria, as results from a certain number of cases of amyloid change in the kidneys, published by Grainger Stewart.* In other cases, on the contrary, the renal affection puts on characters such as it is difficult, if not impossible, not to attribute to syphilis. There, in fact, we observe again the same anatomical forms which we saw already in other organs, viz., the inflammatory interstitial and the gummy forms, and the cicatrices which follow them.†

ANATOMICAL STUDY.

Diffused form, interstitial nephritis.—The change in the kidneys, in this form, is characterised by a new formation of the constituent elements of the stroma. From the first, appearance of nuclei of conjunctive tissue, cellular multiplication; in some cases, fatty degeneration of the new elements. The kidneys, of a medium consistence, present a smooth, colourless surface, studded with fine striæ and slightly yellow points. Later on, these organs are firmer and more resistant to the touch; the capsule is thickened and its surface mammillated; of normal size or even enlarged at first, they gradually become atrophied in consequence of the properties of the newly-formed tissue and, according to the greater or less extent of the nephritis, the atrophy is general or partial. In a case given in Rayer's valuable work, it is mentioned that both kidneys were sensibly smaller than usual; they appeared shrivelled and their mass was much harder than in the healthy state; their form was pretty well retained, their colour yellowish, and their surface presented a great number of inequalities, of small knobs, and rugosities; in fine, they had the appearance of kidneys affected with chronic albuminous nephritis in its latest period, without apparent granulations such as described by Bright.

In a case given by Meyer, the kidneys are stated to be only half the normal size. In one of our own observations, the cortical layer

* *Edinb. Medical Journal*, p. 97, Aug. 1864.

† Out of twenty cases of visceral syphilis observed by us, we found: interstitial nephritis four times (twice with cirrhosis); small gummy tumours, once; cicatrices on the surface with atrophy, several times (*Bull de l'Acad. de méd.* Jan., 1864).

was not more than $\frac{3}{8}$ of an inch in thickness, and the whole medullary substance was yellowish and lardaceous-looking. Consecutively to the changes in the stroma, follows the change in the active elements of the kidneys. The Malpighian bodies, compressed by the elements of conjunctive tissue, soon become atrophied, and several of our observations make mention of this atrophy together with the adhesion of the capsule to the parenchyma of the kidney. As regards the epithelia, they gradually undergo fatty degeneration. Side by side with this degeneration, we sometimes have the opportunity of observing in kidneys thus diseased lardaceous, amyloid, or cirrhone degeneration, which partly interferes with any diminution in volume; but this is never other than an indirect change to which are applicable the considerations upon which we shall enter in reference to cirrhosis of the liver in syphilis. A case connected with this change has recently been communicated to the Medical Society by Dr. Lailler.*

From what has gone before it is easy to infer that kidneys affected with syphilitic nephritis will present characters liable to vary with the course of the pathological process and the period of its evolution, and that they may be modified in their form by the existence of a concomitant amyloid degeneration.

Interstitial syphilitic nephritis thus comes into the group of pathological lesions to which we still apply the name of Bright's disease or chronic albuminous nephritis. But, by reason of its cause, it evidently constitutes, in an anatomical point of view, a variety which it is important to separate and to know how to distinguish. It is not that this distinction can be made without difficulty in the actual state of science; but as it is especially with the lesions occasioned by the abuse of spirituous liquors that syphilitic manifestations are liable to be confounded, we shall say here what we shall repeat when we have occasion to distinguish alcoholic cirrhosis from syphilitic cirrhosis: the interstitial parenchymatous inflammation produced by the immoderate use of spirituous liquors is more general, it causes a more complete atrophy, and does not usually occasion upon the surface of the diseased organ the deep and cicatricial depressions of syphilitic inflammation. It is not less important to know how to distinguish this change from gouty nephritis and infarctus of the

* See *Gaz. hebdomadaire de médecine et de chirurgie*, p. 524, 1865.

kidneys; but the analogy is too slight to make it necessary to dwell further upon it.

Circumscribed form, gummy tumours.—Although little frequent, the existence of gummy lesions of the kidneys cannot be doubted; the secreting organs of the urine are not, any more than the other viscera, exempt from manifestations of this kind. Let us examine the facts: in a case in which Féréol was led to admit a syphilitic origin,* the change in the kidney appears to have resembled much more suppurating nephritis than a gummy syphilitic lesion. But the same does not hold good in a case observed by Tüngel, and in another given in Cornil's thesis.

In the same way, we believe that there is question of gummy tumours in one of our own observations, in which there were found on the surface and in the thickness itself of the cortical substance of the kidneys small tumours of the size of a pea, of a yellowish white colour, and presenting, on examination by the microscope, the cellular and nucleated elements which we have had occasion to point out under various other circumstances, in which the presence of a gummy manifestation could not be the object of any doubt. In these cases, moreover, the surface of the kidneys was modified and cicatrised at some points. The characters of the gummy tumours in these various cases did not differ from those with which we are acquainted. Of a firm consistence, of about the size of a pea, they were circumscribed by a greyish, semi-transparent zone.

The lesions to which these products bear the closest resemblance, are tubercles and hæmorrhagic infarctus. Tubercles usually coexist with greyish granulations the presence of which, in the lung at least, is so to speak constant whenever there is a tubercular product in any part of the body; they invade the kidneys from the summit to the base of the pyramids. In a case which came under our notice, a tubercle developed in the cortical substance of the kidneys might have passed for a gummy tumour, without the existence of granular phthisis in the lungs. In this case, however, the almost complete fusion of the tubercular neoplasm with the neighbouring renal tissue, and the diffuent softening of the central parts of this product might, to a certain point, have served to distinguish it from the syphilitic gummy tumours. The brownish or mottled appearance of hæmorrhagic infarctus, and in its absence the histological composition of these lesions formed entirely of the true elements of the kidney and

* *Bulletin de la Société anat.*, 1853, p. 412.

of blood globules in a state of retrograde transformation, are circumstances sufficient to leave no reason for confounding them with syphilitic deposits.

Cicatrices.—Under this name we are not describing a special lesion, as we know already, but only an advanced or last phase of the lesions which constitute the preceding forms. It is only a question here, then, of a consecutive state which, sometimes forming the whole anatomical derangement in the kidneys, appears to us, on that account, to call for a special description.

Syphilitic cicatrices of the kidneys are met with in a certain number of cases; they had already been mentioned by Rayer in his excellent *Traité des maladies des reins* (Obs. 68^e, t. ii. p. 493). Allusion is made to them in several of the cases of visceral syphilis given by Leudet; we read in Observation XIII. :—"The kidneys, somewhat diminished in size and of a uniform yellowish waxy appearance, without Bright's granulations, have their surface interrupted by cicatrices and deep blackish depressions, without the colouring matter contained in the cicatrices." In several of our own observations, mention is made of cicatricial furrows, generally of little depth, of variable extent, irregularly disseminated, and of which the base is found to be formed of a whitish fibrous tissue which is often nothing else than the thickened capsule, and in the substance of which no trace of colouring matter is found; or there are depressions of greater or less depth, from which radiate furrows of slight extent.

These various changes present a great analogy to the depressions and cicatrices which follow hæmorrhagic infarctus, and which, in fact, are nothing else than the result of the absorption of the true elements of the kidney necrosed from the obliteration of the arteries. But these infarctus are recognised by the habitual integrity of the fibrous capsule and by the pretty constant presence of the colouring matter of the blood in their vicinity. Moreover, they present a peculiar arrangement which is not without relation to the distribution of the blood-vessels, and they usually coexist with some cardiac affection.

SYMPTOMATIC STUDY.

The physical signs are not here of much value, on account of the extreme difficulty which an examination of the kidneys presents, those organs being so deep-seated and situated on either side of the vertebral column. As for functional derangements, these

exist in a certain number of cases only, and it is in the inflammatory form, or interstitial nephritis, that they are most frequently met with. It is easy to understand the slight importance of them in the two other forms, in which the kidney is most frequently diseased in part only of its extent. At the first, the albumen passes into the urine, usually in small quantity, even in cases in which there is a concomitant amyloid or fatty degeneration; the ordinary reagents cause a precipitate in the urine, the physical characters and chemical properties of which do not differ from those which are observed in the generality of cases of Bright's disease.

Syphilitic albuminuria, like most of those which recognise as their cause a chronic affection of the kidneys, is accompanied by œdema or anasarca. Generally little marked, these symptoms, according to Bazin, are frequently wanting, more frequently, for instance, than in the cases in which the renal lesion acknowledges a scrofulous origin. When this albuminuria is persistent, it indicates a serious lesion of the kidneys and may entail all the phenomena known under the denomination of *uræmic*; thus we sometimes see vomiting and diarrhœa, sometimes cerebral derangements, and coma which often proves fatal. In the case of a patient who had been treated only two years before for a syphilitic eruption in the Hôpital du Midi, death supervened after coma of short duration; the only lesion to which it was possible to attribute such a termination was nephritis with amyloid degeneration.

The course of syphilitic affections of the kidneys is slow and continuous, their duration generally long, and their termination most frequently fatal. I am speaking here only of renal affections of the tertiary period. Albuminuria is also met with in the secondary period, as appears from two cases reported by Dr. Perroud (*Journal de médecine de Lyon*, février, 1867), but then the prognosis of the affection is more favourable. The albuminous symptoms in both these cases became developed in from four to six months after the indurated chancre and at the same time as the syphilitic lesions called secondary.

I am not aware of a single case of well authenticated and lasting cure of syphilitic albuminuria of long standing; such a cure seems possible, however, if an appropriate treatment be adopted sufficiently early. The rapid improvement observed in one case (Obs. XXVI.), in which there was question of a lesion which was not recent, is at least adapted to give some hope of such an occurrence.

The antecedents of the patient, the concomitant syphilitic manifestations, and a state of peculiar cachexia; such are the circumstances which will put us on the track of the diagnosis. Let it not be forgotten that the presence of an external specific affection is not always necessary for the recognition of syphilitic nephritis, and that the mere concomitant change in some viscus often suffices. In fact, syphilitic manifestations of the kidneys and liver frequently coexist, and the deformation of this latter organ, when it coincides with the presence of albumen in the urine, constitutes a strong presumption, if not a certainty, in favour of visceral syphilis. This coexistence is found in several of our observations, and has never been wanting since our attention became fixed upon this point. It is mentioned, moreover, in Rayer's excellent work, and is further met with in the three observations furnished by that learned teacher. The following case is a good instance of it.

Chancre.—Alopecia, tubercular syphilide; ulcer on the leg and slight exostosis. —Increase in size of the right lobe of the liver and deformation of that organ.—Albuminuria.—Great improvement.

Obs. XXVI.—P., a female æt. 52, is a woman of good constitution, who has had, in the shape of acute diseases, two attacks of inflammation in the chest. Her mother died of dropsy, at the age of sixty-four years; her father lived until seventy-eight; her brothers and sisters are healthy. She has a son now twenty-four years old.

Twelve years ago, her husband, a debauchee, had been ill several months when she noticed the presence, in her left groin, of a swelling which soon suppurated, and lasted four months; a cicatrix still exists at that point. At the same time her hair fell off, but without any throat affection or eruptions; there was general lassitude with a feeling of fatigue, and a yellowish, earthy colour of the skin. All these symptoms disappeared at the end of three weeks of a specific treatment.

About six months later, there appeared upon the anterior and superior part of the left tibia a circumscribed tubercular syphilide, now recognisable by the white and depressed cicatrices which exist at that spot. In spite of a fresh treatment, which lasted two months, the syphilide continued. There afterwards supervened, according to the patient's account, a reddish swelling which terminated in a large ulcer still visible on the anterior and inferior surface of the right leg.

In this state, this woman, who was often maltreated by her husband, nevertheless worked so as to meet all his wants when, about three months ago, she felt her strength gradually decline; she became emaciated by degrees, and remarked that her complexion, which was already somewhat yellow, assumed a paler and more earthy tint. At the same time she ex-

perienced, in the epigastric region and right hypochondrium, a sensation of uneasiness which was soon replaced by a continuous dull pain, with shootings and prickings which returned at intervals. Only a week before seeking for relief at the hospital, there were added to these symptoms dragging pains in the head, with intense nocturnal exacerbations; sleep became impossible, and, not being able to work any more, the patient determined to enter the Hôtel-Dieu, May 29th, 1863.

The following was her condition on admission:—Her countenance was expressive of suffering; she complained of intense cephalalgia, which prevented her from walking; since yesterday she feels so giddy that she cannot stand; she has short accessions of delirium; there is no paralysis of motion or sensation; the sight is intact. Alopecia; hyperostosis of the right tibia; ulcer upon the leg of the same side. Respiration normal. Pulse quick; movements of heart jerking; sounds of heart normal. Anorexia since the commencement of the cephalalgia; no vomiting, but a feeling of acute and lancinating pain at the epigastrium and right hypochondrium, aggravated by movements of the trunk, pressure, or even simple palpation of the liver. That organ is irregular in shape; the right lobe, uneven, knobby, and much developed, reaches below a horizontal line drawn from the umbilicus, while the left lobe is almost imperceptible to percussion and palpation; the dulness ceases, in fact, at the external edge of the rectus abdominis muscle of the right side. The spleen does not appear to be sensibly increased in volume. The urine, which is pale, contains a considerable quantity of albumen. The skin is remarkable for its dirty, bronzed yellow tint.

On the 3rd of June, the patient was put upon a specific treatment. Dr. Potain ordered her thirty grains of iodide of potassium. Two days after, the cephalalgia had entirely ceased. Soon after, the pains in the epigastrium and right hypochondrium ceased, though still continuing to be renewed on pressure. From this time the countenance became more natural, the colour of the skin better, and the patient ceased to complain of pain; she could sleep and gradually regained strength and even flesh. The ulcer on the leg was partly cicatrised. The liver appeared to be decreasing in volume, but still continued painful on pressure. The urine, tested by heat and nitric acid, continued to give an abundant precipitate of albumen.

June 18th, there was no longer any albumen in the urine. Her strength continued to increase and, with the exception of the ulcer on the leg and the pain in the liver on pressure, the patient feels pretty well. Her condition on the following days continued the same.

July 16th, the patient still continued to improve. The urine was passed in normal quantity, but rather pale. It gave a very slight precipitate with heat and nitric acid. It showed, on examination, some granular cells, proceeding, most probably, from the uriniferous tubes, and, moreover, numerous granular globules analogous to those of leucocythæmia.

From that period, the patient has remained well, but nevertheless continued the treatment until she left the hospital. The right lobe of the liver was then still slightly larger than natural, but there was scarcely any

albumen in the urine. She had recovered her strength and even gained flesh to a certain extent.

If the prognosis of syphilitic lesions of the kidneys without albuminuria is usually favourable, the same cannot be said when it is present. At this point, we think we cannot do better than quote the exact words of Rayer:—"I know few diseases," says our teacher, "which offer so few chances of cure as these complicated cases: these complications of inveterate syphilis with changes in the liver and kidneys are almost always incurable. However, I have been fortunate enough, very recently, to improve the deteriorated constitution of a patient in our hospital who found himself in a similar condition, and in whom the urine became less and less albuminous, after two months of treatment which consisted in the use of Feltz's tisane (corrosive sublimate with sarsaparilla), Sedillot's pills, and gummy extract of opium."

ARTICLE IV.—APPARATUS OF DIGESTION.

§ 1. *Syphilitic affections of the mouth and pharynx.*

Nicolas Massa, in *Aphrodis.*, p. 44, describes gummy tumours of the pharynx with ulceration, and the asthma and diarrhoea which frequently follow them. Gabriel Fallopius, *De morbo Gallico tractatus*, cop. 97 et 98. W. H. Bucholtz, *De cicutæ efficacia in ulceribus faucium et veli palatini venereis*. *Nova acta Acad. Nat. Curios.*, t. iv. p. 261. Van Swieten, *Commentaria in Hermann Boerhaave Aphorismos*, t. v. p. 369. Paris, 1773. E. Horn, *Versuche über Wirksamkeit des Eisens in veralteten vermischten, und mit mercurial Cachexie verbundenen Geschwüren*. *Archiv. für med. Erfahrung*, i. Band, i. Heft. John Hunter, *Complete Works*, p. 558. Maisonneuve, *Des tumeurs de la langue*. Thèse de concours, 1848. Bouisson, *Gaz. méd. de Paris*, 1846. Fano, *Sur les tumeurs de la voile du palais*. Thèse de concours, Paris, 1857. Sigmund, *Das papulöse Syphilid am weichen Gaumen und an den Mandeln*. *Österr. Zeitschr. für prakt. Heilkunde*, No. 35, 1858. W. J. Coulson, *The Lancet*, t. ii. Nov. 20th, 1862. Lagneau, *Des tumeurs gommeuses de la langue*. *Archiv. génér. de médec.* t. i. p. 217, 1860. C. Adler, *Die syphilitischen Geschwüre der Zunge*, *Wien. med. Halle.* i. Nos. 3 and 6, 1861.

As the primary or secondary lesions of the mouth and pharynx scarcely differ from chancre and the cutaneous eruptions, so the tertiary affections of those parts have the closest analogy to those of the skin and cellulo-adipose tissue. This analogy, which has struck

us, did not, moreover, escape the observers who had recognised the frequent coexistence of the changes we are about to examine with the deep-seated and tardy changes in the external tegument. In fact, there is no notable difference in the nature or constitution of the elementary lesion according as one or other tegument is affected, but variability in the course dependent, above all, upon non-identity of texture. The velum palati, the palatine arch, the tongue, the pharynx, the tonsils; such is the usual seat of these affections, which present themselves under various aspects and sometimes appear at slightly different periods. Some, more precocious, in the form of more or less deep ulcerations, are assimilable to rupia and to tubercle of the skin, others, more tardy, resemble rather gummy tumours of the sub-cutaneous cellular tissue.

A. TARDY ULCERATIONS, DEEP ULCERS.

The tonsils, the velum palati, the upper and posterior part of the pharynx, are the favourite seats of these lesions. According to Babington, one of the authors who have described them best, these affections, when they coincide with rupia, usually commence on the surface of the mucous membrane by a small putrid ulceration which soon becomes changed into rapid and extensive gangrene. They are sometimes preceded and always accompanied by much pain and inflammation. The velum palati becomes swelled and descends; attempts to raise it in the act of swallowing cause excruciating pain; in the act of pronunciation it appears to remain entirely motionless. The irritation produced in it by the presence of the eschar causes an abundant secretion of saliva, and often much cough. The anguish which sometimes results from it betrays itself in a remarkable manner in the face. This morbid phenomenon, combined with rapid emaciation, acceleration of the pulse and puriform expectoration, suggest the idea that the patient is in great danger, and often lead to the supposition that he is the subject of phthisis.

When they coincide with tubercular eruptions of the common integument, these ulcers appear to commence, in their most distinct form, at the centre of the tonsil. In the first period, there is very little pain and swelling. Attention is rarely paid to the disease until it has produced a distinct ulcer. But if, from any cause, attention is directed to the throat, it is sometimes possible to recognise the morbid condition which precedes the period of ulceration. The tonsil is

slightly swelled; something yellow is perceived, which has its seat in the substance of that organ and shines through the membrane covering the still intact surface of it. In one or two days, the ulcer forms and presents a yellow or bluish eschar, which penetrates deeply into the centre of the tonsil. There is not much swelling, and the surrounding parts are not violently inflamed. The course of this affection is slow and the inconvenience which accompanies it inconsiderable. Like the preceding change, it extends in depth or superficially; hence serpiginous ulcers and perforating ulcers presenting, in some cases, a phagedænic appearance.

Serpiginous ulcers occupy, by preference, the velum palati; they also follow most frequently the first variety. Their progressive extension is such that the tissue of the organ appears to melt under the ulceration, and that often the greater part or whole of the velum palati is destroyed before it is possible to stop it, although no distinct eschar has been observed to separate itself in the whole course of the disease. The floor of the ulcer is pale, smooth, or fungosities appear upon it, in the intervals between which lies ichorous pus; its edges are irregular and split sometimes to a considerable extent, and surrounded by a narrow zone of inflammation (Martellière). The mucous membrane is generally the only one affected, the deeper parts rarely participating in the formation of the ulceration.

Perforating ulcers gain in depth what they lose in extent. The velum palati, the palatine arch, the tonsils and the pharynx are the regions in which they commit their ravages. The soft parts are destroyed with a rapidity sometimes very great. All the tissues are reduced to a pulp or putrilaginous mass which adheres to the floor of the ulcer, the œdematous edges of which, round or oval in shape, are cut perpendicularly. The lesion commences by a moderate inflammatory redness, accompanied by a somewhat painful state of the movable parts of the throat, while the palate itself remains indolent. After a few days, a spot of a dirty white colour appears at the centre of the zone of inflammation, burrows, and becomes the starting-point of the perforating ulcer.

In the velum palati, the ulceration, according to Babington, usually commences on its posterior surface, and erodes it from behind forwards until it is destroyed and the uvula falls off. In a case observed by Herbert Mayo,* after having commenced at one side of

* *Treatise on Syphilis*. London, 1840.

the throat, it had penetrated as far as the lingual artery, which it would doubtless have eaten into, if that surgeon had not successfully tied the internal carotid. Ruz^{*} has related a case in which the back of the mouth presented a vast cavity, every part of which was covered with a greyish green layer not unlike the moss upon an old wall. Sometimes the periosteum finishes by being included in this destruction and the exposed bones become necrosed. This lesion, which is most frequent in the palatine arch, is also observed in the larynx and pharynx. J. Frank[†] has given a case of paralysis of the arm due to inflammation of the spinal marrow in consequence of the progress of caries of the vertebræ following a syphilitic ulcer of the throat. Lagneau and Gibert[‡] have each seen a case of syphilitic ulceration of the pharynx with caries of the vertebral column. It would not be correct, however, to believe that all the syphilitic ulcerations of the throat produce similar derangements, because they are generally seen to be limited to the thickness of the mucous membrane. It is important to know that iodide of potassium is the remedy to be employed in those cases in which mercury is often inefficient.

B. GUMMY TUMOURS.

These manifestations supervene at a more advanced stage only of constitutional syphilis. The tongue, the pharynx, and the velum palati are their usual seat, more rarely the lips or cheeks.

Tongue.—Ricord,[§] Bouisson^{||} and Lagneau[¶] are the authors who have most carefully studied the gummy tumours of the tongue. These tumours, of which Lagneau has succeeded in collecting ten cases, develop themselves at all points of the organ. They are met with either in the superficial or deep sub-mucous layer, or in the intermuscular conjunctive substance; but their favourite seat is the base of the tongue. Rarely single, most frequently multiple, rounded

^{*} *Journ. hebdom.*, t. viii. 1832.

[†] *Traité de pathologie interne*, trad. fr., t. v. 1857.

[‡] *Traité des maladies de la peau et de la syphilis*, p. 359, t. ii.

[§] *Traité pratique des maladies vénérées*. Paris, 1838, et *Clinique iconographique*, 1860.

^{||} *Gaz. médic. de Paris*, 1846.

[¶] *Des tumeurs syphilitiques de la langue* (*Gaz. hebdom.*, 1859, Nos. 32, 33, 35; et *Archiv. de méd.* t. i. 1860, p. 217. Compare Maisonneuve, *Sur les tumeurs de la langue*. Thèse de concours. Paris, 1848.

or irregular, they vary in size between the dimensions of a pea and those of a nut; they become enlarged gradually; firm and greyish, or whitish at first, they afterwards soften at the centre and become doughy or yellowish, while the parts which cover them, and to which they adhere but slightly at first, are raised and distended, assume a mottled appearance, insensibly become changed, and finally end by sloughing. Thus laid open, if the retrogression be sufficiently advanced and the softening considerable enough, they empty themselves after the manner of an abscess; if not, there is seen beneath the shreds of the ulcerated and split mucous membrane the yellowish colour of the pathological product in the process of degeneration and in the form of caries which gradually become eliminated, and leave behind them ulcers more or less deep, of an oblong shape, with irregular perpendicular edges. Surrounded by parts which are swelled, reddish, mottled, and œdematous, these ulcers present a greyish floor, indurated and covered with a false membrane; sometimes studded with gangrenous spots, they easily bleed on contact with the teeth, and when they close there follows the destruction of a portion of the tongue which is sometimes considerable, so that there may result from it later on a serious deformity of that organ. After a longer or shorter time, the swelling of the ulcerated edges decreases, fleshy granulations develop themselves on the surface of the ulcer and cicatrisation commences. Such is the natural evolution of these lesions. The course of things is somewhat different when an appropriate treatment is adopted. If these tumours take the form of firm nodosities, they are seen to lose their consistence, the tissues in which they were developed become supple, and soon nothing remains to bear witness to their past existence. If they are situated superficially, their yellowish white colour is seen to be gradually replaced by the normal red colour of the mucous membrane. It is sometimes possible, however, to recognise the spot occupied by these tumours, because there is wanting at that point the furred coating which covers the other parts of the tongue.

The organic or functional symptoms connected with these manifestations are the following: latent, insidious commencement; at the very first, they escape the notice of both patient and physician, and if at all deeply seated, they are not recognised except by taking between the fingers the tongue which appears to be stuffed with nuts (Ricord). The organ is increased in size, either through its whole extent or in places. Small and firm at first, these tumours

become prominent and lose little of their consistence; the mucous membrane covering them becomes thinned; the tongue often extends between or even beyond the teeth, whence ensues a continuous and abundant secretion of saliva. At the same time mastication becomes more difficult, swallowing is painful and impeded, respiration is embarrassed, and in some cases a deafness has been observed resulting from an obstacle caused by the swelling of the parts to the circulation of air in the Eustachian tubes. Lastly, these tumours may burst and discharge a semi-fluid puriform matter, a kind of granular serosity, whence the formation of the ulcerations described above, and, in certain cases, absorptive fever.

An evolution peculiarly chronic and the constant absence, so to speak, of glandular swelling, are the characters important in reference to the differential diagnosis of these tumours from chancrous ulcerations and cancerous affections. Moreover, we have already called especial attention to these different points.

Velum palati and palatine arch.—The gummy tumours of these regions have not yet been the object of a special description. Ricord and Vidal (de Cassis) merely mention them. Bouisson* says but little about them, he speaks of having observed in several patients affected with inveterate syphilis, indurations, sometimes circumscribed, sometimes diffused, of the velum palati, without ulceration of the mucous membrane covering it. In a patient who came to consult him for an exostosis and caries of the bones of the nose, he found in the velum palati a hard tumour the size of an almond, without ulceration of the mucous membrane.

In a paper on tumours of the palatine region, Parmentier† gives concerning gummy tumours of the velum palati some details which we think it desirable to quote :—" Small and scarcely perceptible at first, these gummy tumours are hard, adherent to the mucous membrane by a kind of pedicle, and movable in the subjacent and neighbouring parts; they increase in volume slowly and without pain, attain the size of a nut, and the mucous membrane, which until then had remained without change of texture or colour, becomes of a mottled, reddish brown tint, the sub-maxillary region swells, the patient complains of noises in the ears and sometimes of almost complete deafness, swallowing is difficult and painful, the voice is

* *Gaz. méd.*, 1846, p. 595.

† *Essai sur les tumeurs de la région palatine (Gaz. méd. de Paris, 1857).*

snuffling, and fluctuation is seen through a kind of shell which serves to cover the tumour; the mucous membrane becomes perforated at one or several points, and there escapes an ichorous pus, ill-formed and containing organic detritus. To these openings soon succeed ulcers with prominent, perpendicular edges, and a greyish floor; they make rapid progress, perforate the velum palati, and a communication is established between the buccal cavity and the posterior part of the nasal fossæ.*

The symptoms of angina which precede the opening of the tumour being those which attract the attention of the patient and determine him to call in the aid of art, it is easy to understand how we might assume the existence of a simple abscess of the velum palati if we did not question him as to his antecedents. At first, before any trace of fluctuation exists, the idea of glandular hypertrophy or of some cancerous tumour may arise. But glandular hypertrophy produces a tumour which is always firm and does not manifest any tendency to ulceration. For this lesion, moreover, as for a cancerous tumour, the commemorative signs will aid greatly in the diagnosis. The prognosis is serious, on account of the perforation of the velum palati, a frequent result of this manifestation.

The parietes of the cheeks* and the palatine arch may also become the seat of syphilitic tumours very analogous to those which have just been described. In the palatine arch, these tumours sometimes occasion a change in the periosteum and bones which ends by producing necrosis and perforation.

Pharynx.—Gummy tumours of the pharynx present themselves with characters too little differing from those of gummy tumours of the tongue and velum palati to make it necessary to dwell much upon them. They are also small rounded tumours, generally developed in the sub-mucous cellular tissue. Firm and movable at first, these products, as they grow older, become less consistent, softer, affect the mucous membrane covering them, point externally, and disappear, not after the manner of a collection of pus, but rather after that of an eschar; the opening enlarges, the softened morbid product is eliminated by degrees, there remains an ulcer which becomes covered with ill-looking fleshy granulations, and cicatrisation takes place at last, but always very slowly.

* See *Bulletin de l'Académie de médecine*, Oct. 11th, 1853.

The posterior wall of the pharynx is the most usual seat of these lesions. The periosteum may be its starting-point; Ph. Boyer saw a gummy tumour, developed in front of the vertebral column, perforate the wall of the pharynx. Ulceration is not, however, the necessary termination of these products; under the influence of an appropriate treatment, they may become absorbed without leaving the least trace of their existence, beyond, perhaps, a slight depression. Under other circumstances, they are generally of long duration and have been seen, in certain cases, to lead into serious errors men the most experienced in the matter. "I remember," says Maisonneuve,* "a patient whom Blandin had subjected to a very severe operation for a tumour of the pharynx which he had believed to be an encephaloid cancer, and which he still believed to be such even after an anatomical examination of the tumour. After a cure which occupied six months, the affection returned and soon made such rapid progress that Blandin regarded it as absolutely incurable. This man was sent to Bicêtre, of which I was then chief surgeon. An enormous tumour occupied the left lateral region of the neck and the whole of the parotid region; it penetrated into the pharynx, depressed the velum palati, and threatened to cause death by asphyxia. Iodide of potassium was given to the extent of fifteen grains daily, and in less than six weeks the tumour disappeared without leaving any traces."

This mistake need not cause surprise, cancer being one of the affections most easily confounded with gummy products. I shall not here allude again to the differential characters, which have been described already; I will add, however, that the cancerous tumour is not so distinctly circumscribed as the gummy one, that it is less free, less movable among the surrounding tissues and, unlike the latter, most frequently accompanied by a change in the corresponding glands. Retro-pharyngeal abscesses are also distinguished, if acute, by the inflammatory phenomena of their onset, the others, *i.e.*, the indolent ones, by a softness and veritable fluctuation from the first moment of their appearance.

The prognosis of these affections may be somewhat unfavourable if they interfere with some important function, or if the gummy product, softened and absorbed on the spot, should succeed in producing phenomena of a secondary infection.

* *Leçons cliniques sur les maladies cancéreuses.* Paris, 1854.

These changes are generally followed by deep whitish cicatrices, more or less irregular and, in some cases, by adhesions of the neighbouring parts. Thus we have seen in a patient who died at the age of 59 of visceral syphilis, the velum palati partly destroyed and adherent to the posterior wall of the pharynx. Coulson and Sigmund* have given cases of the same kind. Under these circumstances, there sometimes supervene dragging of the neighbouring parts and atresia of the cavities to such an extent as to interfere considerably with the functions of speech and hearing. The presence of these remains is of great importance diagnostically in reference to the syphilitic manifestations of the viscera, which, without them, might often pass unperceived. The deep-seated lesions of the throat and velum palati are, in fact, relatively frequent in syphilitic cerebral affections, having been noticed by Virchow three times in eleven cases, and four times in the number of cases which have come under our own notice.

§ 2. *Syphilitic affections of the œsophagus.*

Like the lesions caused by small-pox or scarlet fever, the eruptive manifestations of syphilis, as we already know, confine their action upon the digestive tube, to the mouth and pharynx. The œsophagus, the stomach, and the small intestines are in general exempt, since in those organs only we meet with the deep-seated and tardy lesion whose special character is to produce contraction of their canal. An insufficient number of facts and the rarity of these manifestations themselves, render difficult the study of them, which is still more impeded by the impossibility of observing them in their first period and of following them in their evolution.

There is no proof that the physicians of the first centuries of syphilis were acquainted with these changes. Severinus was one of the first to mention syphilitic ulcerations of the œsophagus and trachea:—"Culto anatomico tradita cadavera variorum syphilide extinctorum exhibebant exulcerationes, tum in œsophago, tum in trachea."† Rhodius‡ has given a case of lesion of the œsophagus

* *Wiener med. Wochenschrift*, 1854, No. 48, and *Æsterr. Zeitschr. für prakt. Heilkunde*, 1857, No. 29. Compare: H. J. Paul, *Archiv. für klinische Chirurgie*, t. i. p. 448.

† In Lieutand, *Hist. an. med.*, t. ii., liv. iv. Obs. CV.

‡ *Ibid.*, t. ii., liv. iv. Obs. CII.

to which it would, perhaps, be possible to attribute a syphilitic origin. Follin * has exhumed two cases, one by Buysch † and the other by Haller, ‡ which seem to refer to this subject. Paletta § has observed a case which resembles the preceding. There was dysphagia, supervening after the suppression of leucorrhœa and the disappearance of a papular eruption. An observation by Daniel Turner, || quoted by West, of Birmingham, and two others by Carmichael, ¶ are not more conclusive than the preceding and leave, like them, doubt in the mind. A case observed by Parker is not more convincing. Wilks ** admits syphilitic contractions of the œsophagus. An anatomical specimen preserved in the museum of Guy's Hospital (No. 1784-95) shows, at the junction of the œsophagus and pharynx, a contraction which that author believes to have followed a syphilitic ulcer. Virchow †† describes a contraction of the same kind. Follin ‡‡ states that he saw two cases of œsophageal dysphagia which might have been connected with syphilis. In one of the cases, there existed a psoriasis in the palms of the hands, and the patient recovered without the use of the sound; in the other, the lesions were more deep-seated and the cure was not complete; these were cases doubtless, says that author, of cicatricial lesions which may be ameliorated but cannot be cured.

A special work on this point, which we owe to West, §§ contains two observations by himself, one of which, with the post-mortem examination, appears sufficiently convincing to leave no doubt concerning the existence of syphilitic contraction of the œsophagus.

J. M., æt. 21, was admitted into Queen's Hospital, Birmingham, May 18th, 1858, after having attended several times at that hospital for various secondary syphilitic symptoms (squamous eruption, sore-throat). On admission, she complained of an almost absolute inability to swallow, deglutition was painful and followed immediately by rejection of the food;

* *Des rétrécissements de l'œsophage*. Paris, 1853.

† *Nov. anatom. med. chirurg.*, decad. i. art. 10, 24. .

‡ *Opusc. patholog.*, Obs. LXXII.

§ *Exercit. patholog.*, 1820.

|| *A practical dissertation on the venereal disease*, 1732, Part I. p. 6.

¶ *An essay on the venereal disease*, 1814.

** *Pathological anatomy*, p. 258; and *On the syphilitic affections of the internal organs*, p. 41, 1863.

†† Obs. IV. of his work.

‡‡ *Traité élém. de pathol. externe*, t. i. p. 696. Paris, 1861.

§§ *Dublin Quarterly Journal*, Feb. 1860; and *Arch. de méd.*, 1860.

it occurred twice a day, however, that food passed without difficulty. The back part of the throat was the seat of extensive ulcerations, which occupied the tonsils, velum palati, and the pillars of the fauces, of a grey colour, studded here and there with red spots. Extreme emaciation, anæmia, a feeble pulse, and scanty urine. Iodide of potassium grs. 5, in an ounce of decoction of cinchona, three times a day, and a gargle with hydrochloric acid, &c., were ordered.

This treatment was continued until May 28th, then an attempt was made to pass a sound into the œsophagus, but without success; quinine was ordered in two-grain doses. At first, nitrate of silver was applied to the ulcerations in the throat; later on, sulphate of copper; swallowing of liquids became somewhat easier, but the patient continued to get weaker. The sulphate of quinine was changed for citrate of quinine and iron. The attempts to introduce a sound were continued and a gargle with corrosive sublimate ordered. All this produced but little amelioration. It was then that, despite the progressive loss of strength in the patient, and although she had already undergone mercurial treatment several times, it was determined to give her corrosive sublimate in decoction of cinchona three times a day and to rub in mercurial ointment in the axilla.

July 25th, the gums began to be affected, and it became necessary to stop the specific treatment; for some days the patient experienced a slight improvement and swallowed rather more easily.

August 6th, this transient amelioration ceased. All sorts of sounds were tried unsuccessfully; the patient was at last unable to swallow at all, and died exhausted on the 2nd of September.

Post-mortem examination.—Body much emaciated, the lungs presented tubercles in various stages of softening and several cavities at both apices; one of these cavities, situated in the left apex, was of the size of a pigeon's-egg. The upper part of the œsophagus, to the extent of four inches, was much dilated; the mucous membrane, greatly thickened, presented here and there spots which appeared due to recent cicatrices.

Beneath this dilated portion, the œsophagus suddenly became contracted, and formed a narrow canal which scarcely admitted a sound No. 4. The contraction, which was about two inches and a half in length, was produced by a thickening of the mucous membrane and by fibrous deposits, in the form of bands and bridges, which closely resembled those seen in old contractions of the urethra. Below the contracted point and as far as the stomach, the œsophagus was perfectly healthy.

The liver, which weighed two pounds four ounces, was soft and apparently fatty; its surface was furrowed by fibrous deposits, and its capsule presented here and there slight thickening. The capsule of the spleen, which was softer than natural, presented the same changes as those of the liver. There was a probable cicatrix at the entrance of the vagina; the other organs were but little if at all changed.

Not only the symptoms observed during life, but the lesions found after death, as well in the œsophagus as in other viscera, and espe-

cially in the liver, plead here in favour of the syphilitic origin of the contraction. The fibrous deposits in the form of bands are little compatible with the hypothesis of a contraction following a tubercular lesion. The change in the liver, moreover, bears witness to the existence of visceral syphilis. The second case related by the Birmingham surgeon is far from having the same importance; but nevertheless the action of syphilis upon the œsophagus cannot be contested, and there is reason to believe that the cicatricial lesions pointed out in the foregoing case are the result of morbid modifications analogous to those observed in the pharynx after ulcerative gummy deposits. This, at least, is what the presence of the fibrous bridges mentioned above would lead one to suppose.

With such a small number of facts, it is quite impossible to pretend to establish signs sufficient for the diagnosis of the syphilitic affections of the œsophagus; it may be said, however, that these affections usually present the characters of fibrous contractions, from which they differ only in their course and in the syphilitic manifestations which may accompany them. These two circumstances also distinguish these contractions from all those which acknowledge a different cause.

The prognosis, comparatively more favourable than if there were question of a cancerous affection, is nevertheless serious unless a specific treatment be employed at an early period of the affection; later on, in fact, when the cicatrices exist, this treatment becomes useless.

§ 3. *Syphilitic affections of the stomach and intestines.—Syphilitic gastro-enteropathies.*

Bulletin de la Société anatomique, tt. ix. et xxi. *Cullerier*, De l'entérite syphilitique. *Union Médicale*, 1854. *Ernst. Müller*, Ueber das Auftreten der Constitutionellen Syphilis im Darmkanale, Inaugural Abhandlung. Erlangen, 1858. *E. Huët*, Ueber syphilitische Affectionen des Mastdarms, mit Abbildungen. In *Behrend's Syphilidologie*, neue Reihe, Band ii. Heft i. 1858. *Venot*, Diagnostic différentiel de l'anite ulcéreuse. *Journal de méd.* de Bordeaux, Nov. 1858. *Bovers*, Sur les rétrécissements organiques du gros intestin, par suite de la syphilis. *Gaz. Sard.*, Nos. 46 et 47, 1858, et *Schmidt's Jahrb.*, Bd. 104, p. 69. *Gosselin*, *Archives génér. de médecine*, t. ii. 1854, et *Nouveau Dictionn. de médecine et de chirurgie pratiques*, t. ii., art. Anus, 1864. *Bumstead*, Maladies syphilitiques du gros intestin. *Americ. Med. Times*, N. Ser. viii., May 21st, p. 247.

The authors who have written on syphilis of the viscera generally

keep silence on the subject of syphilitic affections of the stomach. However, when we consult the already numerous cases of visceral syphilis, we find in them mention of various lesions, such as partial hypertrophy or ulceration of the parietes of that organ.

Several observations contained in the works of Virchow (Obs. VII. and VIII.) and of Leudet (Obs. VIII.), and a certain number of cases seen by us, point out the existence of a thickening of a more or less extensive portion of the mucous membrane of the stomach, a thickening or hypertrophy the anatomical characters of which appear to indicate a connection rather than a simple coincidence in reference to syphilitic infection.

From another quarter, Brinton* states that in one hundred ulcers of the stomach, Engel found ten which manifestly proceeded from syphilis. But, to bring conviction on such a point, facts are necessary. Here are two known to ourselves. We read in the *Bulletin de la Société Anatomique* for 1858 (p. 224):—"M. Fauvel exhibited a stomach the parietes of which were hypertrophied, especially in the vicinity of the pylorus, and the mucous membrane ulcerated at various points. As the woman to whom this stomach belonged had shown syphilitic antecedents and an exostosis existed upon one of the tibiae, it was believed that this thickening of the parietes was due to hypertrophy of the fibrous coat developed morbidly and under the influence of the syphilitic cachexia." The mere existence of syphilitic antecedents evidently does not suffice here to prove the syphilitic nature of the change in the stomach, but it will not be without interest to compare with this case the following one:—A man of 66 years old died at the Hôtel-Dieu in September, 1863. At the post-mortem examination I found a number of visceral lesions manifestly syphilitic and at the same time a change in the stomach which appeared to be attributable to the syphilitic infection.

There was nothing remarkable in the brain or heart, but there was pulmonary hypostasis; the liver was knobby and ploughed up by bridles and cicatrices; kidneys waxy; periorchitis on the right side. There was swelling and induration of the iliac and of most of the prevertebral glands. The stomach was of about the normal size; at $\frac{1}{2}$ of an inch from the pylorus, in the lesser curvature and to an extent $\frac{1}{2}$ of an inch, there existed an ulcer which had almost

* *On diseases of the stomach.* London, 1859.

entirely destroyed the parietes of the stomach ; small fatty masses slightly adherent and collected behind this ulcer partly prevented perforation. The edges of the ulcer were fibrous, indurated, and beveled at the expense of the mucous membrane ; they were of a pale grey colour at certain points, in others they had a cicatricial appearance. There were no indurated glands in the vicinity.

Such are the very incomplete data which we possess concerning syphilis in the stomach ; the cases which refer to syphilitic affections of the intestines are not much more conclusive. In fact, these affections are scarcely mentioned in the writings of the syphilographers of the last centuries, and if allusion is sometimes made to syphilitic diarrhœa or dysentery,* no passage is found relative to a well-marked intestinal lesion.

Antoine Chalmet,† however, points out the treatment of intestinal erosions in syphilis, which appears to prove that, in certain cases, he admits the specific origin of those lesions. The remarkable work of J. Frank‡ contains the following case :—"A young woman of 19 had had primary syphilitic ulcers, then secondary ulcers on the neck and a syphilitic eruption ; these affections being cured, she had pains, colic increasing during the day, vomiting, colliquative diarrhœa, and hectic fever. The post-mortem examination showed a single ulcer at the termination of the ileum, another in the cæcum, and three in the ascending colon. These ulcers were declared by Harlt to be syphilitic."

This case is evidently too incomplete for it to be strictly allowable to assign to the intestinal lesion a syphilitic origin and, moreover, what were the characters which served here to establish the specific nature of the intestinal ulcerations ? This is what the report does not state.

In the same manner we think that there is no distinct evidence of a causal relation between syphilis and the ulceration of the intestines pointed out in two communications made several years ago to the Anatomical Society by Choisy and Courtin.§ But can it be said that the intestines are exempt from any syphilitic manifestations ?

* See *Aphrodisiacus* ; further, Boile, *De medica simpl. dysenteria syphilitica* ; and Sauvages, *Médec. méthod.*, t. viii. p. 180.

† Anthonii Chalmetii, *De morbo gallico, Aphrodisiacus*, p. 857.

‡ J. Frank, *Traité de pathologie interne*, trad. franç. t. vi. p. 81.

§ See Choisy, *Bull. Soc. anat.* t. ix. p. 217 ; and Courtin, *ibid.*, t. xxi. p. 351.

I think not. In an interesting work, Cullerier has placed beyond doubt the existence of tertiary lesions of the intestinal canal. The following case, made complete by the anatomical examination, appears sufficiently conclusive.

A woman nine months advanced in pregnancy had previously had ulcers on the velum palati and periostoses, affections for which she had been subjected to treatment with iodide of potassium. This treatment had been given up several times on account of a profuse diarrhœa. Having re-entered the hospital Feb. 16th, she was delivered, the following day, of a puny male child, which died in a few days. The diarrhœa, which had continued since she went out, was still going on, and death soon occurred in the last stage of exhaustion.

Post-mortem examination.—Effusions of serum into all the serous cavities, loss of colour in the heart, liver, and lungs, without any other appreciable change.

The stomach, says Cullerier, appeared healthy, as were also the small intestines, but in the whole extent of the large intestine were seen a great number of ulcers round in form and in various stages, some recent, seated upon a large, hard base, others, more numerous, with a depressed, yellowish grey, and livid floor; some involved the mucous membrane only, and allowed of seeing distinctly the muscular coat; others, which were deeper, included the fibres of that coat also. In several of the latter the muscular fibres appeared as if torn and floated in the midst of the ulcer. All presented a splitting of the mucous membrane around the ulcer, where there was a thickening of the cellular tissue, which formed, as it were, a rounded collar with a central opening; there was no congestion of the mesentery.

The shape of the ulcers and the fibrous collar which surrounds them constitute so many characters which we have already pointed out in reference to syphilitic ulcers of the pharynx, and which plead, consequently, in favour of a syphilitic origin.

Huet of Amsterdam gives the cases of two individuals who, after having presented various syphilitic manifestations, sank under obstinate diarrhœa, and in whom he found, together with lardaceous degeneration of the liver and spleen, multiple rounded ulcers in the large intestine, cicatrices, and warty-looking excrescences. Developed in the sub-mucous tissue, these excrescences had a close analogy to the gummy neoplasms.

A pupil of Dittrich, Ern. Müller, has published the case of a woman at the post-mortem examination of whose body were found in the larynx, the pleura, the liver, the small intestines and the vagina, formations of conjunctive tissue which presented a great resemblance

to syphilitic products. But this case, which is far from being exact in reference to the commemorative signs and course of the disease, leaves some doubt on the mind. In a case of visceral syphilis furnished by Leudet, there existed numerous ulcerations in the large intestine and especially in the transverse colon and rectum. One of these ulcers, in the course of cicatrisation, had finished by causing a contraction which scarcely admitted of the introduction of the first finger. I have myself seen, in a case in which the syphilitic character of the visceral change was indubitable, a thinning of the intestinal wall to the extent of a franc-piece, to such an extent that there remained only the serous membrane and part of the mucous membrane. It appeared that between these two membranes, which were of a violet colour, there had existed a gummy deposit, which had ended by being absorbed.*

These facts, thus brought together, appear to us to show that the intestine is not always exempt from the attacks of syphilis, for if the cases in which that organ is seen to be affected are rare, it is nevertheless true that the multiple, rounded ulcerations circumscribed by a fibrous tissue and more or less deep, of which it is sometimes the seat, are probably nothing else than the result of gummy deposits, that is to say, of the effects of the metamorphosis undergone by those products. The simple thickening of the sub-mucous tissue met with in some cases, and the observation made by Wagner† of deposits not yet ulcerated, are so many circumstances in favour of this view.

The functional derangements which correspond to the anatomical changes in question do not usually present any very peculiar character and their origin is difficult to recognise in the absence of any concomitant syphilitic manifestation. In the cases of affection of the stomach, the symptoms have, in general, been little or ill observed. In a case, however, in which there was every reason to assume a syphilitic affection of that organ, Andral‡ observed pro-

* Meschede (*Archiv für patholog. Anatom. und Physiolog.* t. 37, p. 565) saw in an adult a case of intestinal ulceration which appeared to him to acknowledge a syphilitic origin, but I must confess that the proofs which he gives of such origin are far from conclusive. Consult: Dujardin-Baumetz, *Gazette des hôpitaux*, 16, 1866.

† *Archiv der Heilkunde*, 1863, Obs. XXIX. p. 369.

‡ *Clinique médicale*, t. iv. p. 122.

gressive emaciation with a leaden hue of the skin, loss of appetite, a painful sensation beneath the xyphoid cartilage, frequent eructations, and rejection of food a few hours after being taken. An ulcer which was found in the posterior wall of the pharynx raised a suspicion of syphilis, and the patient recovered under the influence of mercury. In no case has palpation of the abdomen revealed the presence of a tumour in the course of the intestinal canal.

Alternations of diarrhoea and constipation, or a yellowish diarrhoea, sometimes bloody or dysenteric; such are, with gradual wasting and more and more intense cachexia, the chief symptoms which indicate the disease of the intestine. Further on, I shall give cases in which diarrhoea in the course of visceral syphilis was not dependent upon any lesion of the intestine, but upon a change in some other viscus and especially in the liver. The bloody stools, already pointed out by the authors of the last centuries,* are not very rare under these circumstances. A case of this kind is given by Leudet, and our distinguished colleague E. Vidal states that he has observed a similar case which was cured by iodide of potassium. Gendrin has informed us that he obtained a rapid success by the employment of mercury against a diarrhoea of long standing accompanied by cachexia, and which had previously resisted every treatment at the hands of several practitioners.

The course of intestinal syphilitic lesions is generally slow and their duration long. When they terminate in death, this occurs either from the effect of the marasmus resulting from the intestinal derangements (profuse diarrhoea, contraction), or, most frequently, in consequence of concomitant affections or of complications. I am not aware that peritonitis or perforation of the intestine has been observed in any of these cases.

The syphilitic affections of the intestines and stomach not having any special character, it is chiefly upon the antecedent or concomitant manifestations that we must rely for the diagnosis of them. We must not, however, assume the existence of a material lesion whenever we observe, in the course of syphilis, gastric derangements or diarrhoea. We know, in fact, that these derangements have sometimes no other cause than a lesion of the hæmopoietic organs.

It remains for us in concluding the study of the syphilitic changes in the intestines, to mention a rather special affection improperly

* *Aphrodisiacus*.

known under the name of *Syphilitic contraction of the rectum*. In fact, for us as for the authors who have most studied it, this affection is by no means a diathetic manifestation, an expression of constitutional syphilis, but simply an altogether local affection, a lesion by vicinity often occasioned by the purulent secretion of chancres of the anus; in a word, it is a complication of venereal diseases rather than of syphilis. For all these reasons, we shall dispense with a complete description of it and content ourselves with a few words concerning it.

Pointed out by several authors, Morgagni, Desault, Rayer, Laugier, Lagneau, Vidal de Cassis, Tanchou, Costallat, and Bovero, this contraction has been well studied by Gosselin,* whose views have been confirmed by the observations of Bærensprung,† Leudet,‡ and the author of this work.§

Situated from one and a half to two inches above the anus, this lesion consists in the presence of a hard, thick ring, which scarcely admits the first finger and which is found to be formed of the mucous membrane and subjacent conjunctive tissue in a state of fibrous transformation. The corresponding muscular coat is hypertrophied; below the contraction the mucous membrane is turgid, mammillated, cicatrised, or even perforated; above it is simply eroded; it is everywhere covered with a whitish puriform fluid.

Women are much more liable to this affection than men, which reveals itself, symptomatically, by obstinate diarrhœa, more rarely by constipation. The patients experience inclination to pass stools without result, have tenesmus, and void pus in their efforts to defæcate; they become emaciated and fall into a state of cachexia. Examination with the finger permits of recognising distinctly this contraction, which women sometimes attribute to uterine affections only. A seat higher up, larger dimensions, the absence of hæmorrhages, the antecedents of the patient, and the presence of condylomata and fissures at the anus, are so many circumstances which may serve to distinguish this lesion.

Let us observe that anti-syphilitic remedies are of no use here; tonics and local means of dilatation constitute the whole treatment.

* *Arch. génér. de médecine*, déc. 1854, p. 666.

† *Annalen des Charité Krankenhauses*, 1855, vi. i.

‡ *Moniteur des Sciences Médicales*, 1860, p. 1132.

§ *Bull. Soc. Anatomique*, 1859.

We do not wish, however, to lay ourselves open to the reproach of being too exclusive concerning the origin of the contractions of the rectum; we freely admit that it is not impossible that this intestine may sometimes be the seat of a gummy deposit, since these deposits are susceptible of being met with at other points of the intestinal canal.

§ 4. *Syphilitic affections of the glands connected with the alimentary canal.—Closed follicles.—Tonsils.—Salivary glands.—Pancreas.*

It is not rare to meet with a change in the glands connected with the alimentary canal in patients who succumb to internal syphilitic affections; but this change is not always identical, it presents varieties which appear to depend, in part at least, upon the difference in structure of those organs. If, in fact, in the closed follicles, organs the histological conformation of which is very analogous to that of the vascular blood glands, the secreting element is attacked by preference, in the other glands, it is rather the connective tissue which becomes diseased.

A. CLOSED FOLLICLES OF THE BASE OF THE TONGUE, THE INTESTINES, AND THE TONSILS.

Hypertrophy of the closed follicles of the primæ viæ is mentioned in a sufficient number of cases to justify the assumption of something more than a simple coincidence, and this circumstance leads to the belief that certain intestinal ulcerations might well be nothing else than the consequence of a change in those follicles. Hypertrophy is not always the only lesion of the intestinal glands in syphilis. In some cases, these same glands undergo a fibroid degeneration, as was seen by Förster* in a new-born child who presented unmistakable signs of congenital syphilis. The tonsils, being nothing else than an agglomeration of closed follicles, present the same changes, which must be added to the various lesions of which we have already spoken elsewhere.

It must be asked, however, whether it is not as much to an inflammation of the mucous membrane as to the syphilitic injection itself that is to be attributed the cause of these anatomical modifica-

* Würzburg. med. Zeitschrift, iv. p. 1, 1863.

tions. It is difficult, in fact, to establish a distinct connection between constitutional syphilis and the glandular lesions of which we are treating, for, as these lesions are wanting in specific characters, the frequency of their coincidence with the syphilitic manifestations of the viscera is the sole motive for admitting a relationship between them.

B. SALIVARY GLANDS AND PANCREAS.

The facts relating to syphilitic lesions of the salivary glands and pancreas are few in number; but we must not omit to recognise their existence. In the following case there exists, at the same time with a whole series of visceral manifestations, a lesion of the sub-maxillary glands the syphilitic nature of which does not appear doubtful, and if the already numerous cases of visceral syphilis are consulted, it is found that the pancreas is far from being always intact. It may thus be concluded that the pancreas and salivary glands are not, any more than the other organs, exempt from the attacks of constitutional syphilis.

Syphilitic antecedents.—Cicatrix in vicinity of anus.—Erosion of left tibia—Ulcers and cicatrices of pharynx.—Affection of sub-maxillary gland.—Gummy tumours of lungs and pericardium.—Dilatation and contraction of several of the bronchial ramifications.—Cicatrices in liver.—Glandular lesions.—Death in consequence of erysipelas developed around the ulcer of the pharynx.

OBS. XXVII.—R., a female, æt. 45, entered the Hospital de la Pitié, December 17th, 1860.

Tall and moderately robust, this patient was pale and slightly yellow; she came in for an affection of the pharynx, characterised by the presence of small, knotty, rounded protuberances, of a mottled appearance and already in process of softening.

The specific nature of these lesions well established, an appropriate treatment was adopted (Sédillot's pills). In the month of January, 1861, the ulcers began to cicatrise.

January 6th, a severe rigor supervened, not followed by sweating, and soon after, diarrhœa set in which lasted several days.

January 7th, dryness and pain in the throat, with difficulty of swallowing. Uniform redness of the posterior wall of the pharynx, and some of the sub-maxillary glands are swelled and painful.

January 8th, these phenomena were more marked. Towards noon, there appeared on the left ala of the nose an intensely red, rounded patch from $\frac{1}{2}$ to $\frac{3}{16}$ of an inch in extent.

January 9th, the patch upon the ala nasi had extended and some bullæ

were seen upon it; the sub-maxillary swelling was more marked and the redness of the pharynx continued.

January 10th, the erysipelas has invaded the right cheek and reached the meatus auditorius and bell of the ear. The fever is increasing. Towards evening, the forehead and neck were attacked.—In the direction of the larynx the same progress, the patient swallows only with great difficulty, even fluids; after a dry and frequent cough, the voice is lost and there are at times phenomena of suffocation. The pulse is small, irregular and frequent (104).

January 11th, in the morning, the symptoms appeared to have decreased in severity; but in the evening, the pulse was more rapid and intermittent.

January 12th, the erysipelas continued to increase and reached the hairy scalp; the tongue was dry.

Death occurred January 13th, at 4 A.M.

Post-mortem examination.—*Head.*—The glands at the base of the tongue are much enlarged. Oedema of the upper part of the uvula. Two ulcers in process of cicatrization on posterior wall of pharynx.

The sub-maxillary gland of the left side presents numerous furrows, which render its lobules still more apparent; it is more firm to the touch than natural, and looks withered, but is not diminished in size; it presents a yellowish colour, resulting from the presence of fatty granulations; the fibrous septa between the acinæ are thickened; the neighbouring glands are enlarged, soft, and of a medullary appearance.

The cranium is remarkable for a considerable thickness and increased fragility. The brain appears to be intact.

The *thyroid* is hypertrophied and yellowish on section on account of abundant fatty granulations.

Thoracic cavity.—Numerous adhesions unite the lungs to the parietes of the chest. On the left lung are seen small tumours slightly prominent, some rounded, others crescent-shaped. They consist in a granular, amorphous matter, nuclei of conjunctive tissue (cytoblasts), fusiform cells, fatty granulations, and remains of parenchyma of the lung. At this point, the ramifications of the bronchi are dilated, their internal surface is red and injected and their walls thickened.

The *pericardium* is the seat of a gummy tumour the size of a cherry-stone, somewhat soft, yellowish, formed of granular plasma cells. Milky patches on the surface of the heart.

Abdominal cavity.—The liver projects beyond the false ribs by about three fingers' breadth. There are some patches of exudation on its surface. Numerous cicatricial furrows plough up the anterior as well as the posterior surface, some longitudinal, others radiating. Bands of connective tissue unite their borders. They are less numerous on the posterior surface. On section, the organ creaks slightly under the knife; it is of a brownish colour, spotted with yellow.

It was easy to ascertain the dilatation of some of the bile ducts in the neighbourhood of the cicatrices the fibrous tissue of which was prolonged into the interior of the parenchyma.

The spleen, somewhat soft, measured about seven inches in its greatest diameter. The prevertebral ganglia have the size of a nut or a walnut; they are soft and greatly injected. The intestines are normal.

The kidneys are small and the supra-renal capsules voluminous.

The ovaries are manifestly atrophied and fibrous.

Remarkable already by the multiplicity of the lesions found after death, this case is not less so by the almost complete absence of corresponding functional derangements, as there were, in this patient, appreciable lesions about the pharynx only. A symptom of great value, and which might have suggested the existence of syphilitic lesions of the viscera, was the cachexia.

Despite the affection of the pharynx, which is a good example of the lesions of that organ already described, and despite the number of the anatomical changes, it is nevertheless to the erysipelas that death was to be attributed, for, if this affection found in the pharyngeal ulcer the cause of its localisation and perhaps even of its development, it had not, apart from this point of contact, the least connection with the visceral lesions, which offered all the characters of an undoubtedly specific origin.

The cases we are acquainted with evidencing a syphilitic change in the pancreas are extremely rare. In a patient* who died under the care of Professor Rostan, fourteen years after having contracted a chancre, there existed, together with multiple gummy tumours of the muscles, a gummy tumour in the mammary region and two others in the pancreas. These tumours, when examined with the microscope by Verneuil and Robin, appeared to be composed of similar elements. One of the cases which we shall give further on indicates the existence of an analogous tumour having for its seat the same gland. We have, moreover, in several cases of visceral syphilis, found that organ firm, indurated, sclerosed, so that it cannot be denied that it is, like most of the viscera, subject to the diffused and circumscribed lesions of syphilis.

Here ends what we have to say of the syphilitic affections of the salivary glands and pancreas. If the cases are few in number, is it not because these organs are seldom examined after death, and because the functional derangements resulting from changes in them

* *Bull. de la Société anat.*, 1855, p. 26. See also in Virchow, a case in which there existed a contraction of the pancreatic duct.

may easily pass unobserved? It is perhaps reasonable to believe, therefore, that up to a certain point syphilis attacks them more frequently than is generally supposed.

§ 5. *Syphilitic lesions of the peritoneum.*

Can tertiary syphilis affect the peritoneum? Such is the point to be elucidated.

Portal* was one of the first to direct attention to this subject. "I found," says he, "in a man who had suffered from venereal disease badly treated several times, and who had, moreover, felt pain in the lumbar region, of which he complained chiefly at night, the peritoneum thickened to almost half an inch in the part where it covers the lumbar vertebræ and passes in front of the kidneys; several openings were observed in it which discharged pus; the other parts of the abdomen appeared to be healthy." This short report is far from pointing out with certainty the action of syphilis upon the peritoneum; it is probable, rather, that there existed an affection of the bones with purulent deposit.†

A somewhat remarkable case, observed by Albert Puech,‡ is worthy of mention here, although the origin of the peritoneal affection appears to us to remain doubtful. A man who had previously had a chancre, became the subject of an exostosis of the tibia and presented the characters of bronzed skin disease, together with various symptoms indicative of chronic dysentery; he died, and at the post-mortem examination there were found numerous very small ulcers in the stomach, much more developed in the large intestine, deposits in the liver, some purulent, others merely softened, and perfect integrity of the supra-renal capsules. Beyond the points invaded by the inflammation, the intestinal and mesenteric serous membrane was studded, at various points, with peculiar pathological products. These products, thirty or forty in number, consisted of small rounded, disc-shaped or quadrilateral patches, whitish and slightly prominent, some of the size of a lentil, others of that of a 20 or 50 centime-piece.

* *Anat. médicale. Ulcér. du péritoine*, t. v. p. 126, 1803.

† We have sometimes met with one or more non-suppurating prominent masses in front of the lumbar vertebræ, consisting of conjunctive tissue and fat, without notable change of the peritoneal membrane.

‡ *Moniteur des hôpitaux*, p. 1045, 1857.

This case, if it were not an isolated one, would tend to prove that the peritoneal serous membrane may become the starting-point of gummy deposits, for it is to be supposed that the deposits in the liver were rather softened gummy tumours than collections of pus. But, however this may be, if the existence of gummy peritonitis cannot yet be clearly established, the same does not apply to adhesive membranous peritonitis. Pointed out by Simpson, of Edinburgh, in new-born children affected with hereditary syphilis, this affection is not absolutely rare in adults. It presents the peculiarity of being always situated in the vicinity of the viscera and chiefly on the surface of the liver. In the last observations will be found a certain number of these cases of partial peritonitis (perihepatitis, perisplenitis). More rarely this change becomes generalised, though retaining the same characters, as appears to be shown by the following case * observed in the practice of Dr. Hérard.

Exostoses of the clavicles and left malar bone.—Hypertrophy and friability of the bones of the cranium.—Gummy tumour near the fissure of Sylvius.—Small, deformed, adherent liver with cicatricial depressions.—Adhesive phlebitis of portal vein.—Membranous peritonitis without ascites.—Hypertrophy of the spleen.—Kidneys larger than natural and diseased.—Hypertrophy of the lymphatic glands and thyroid.

Obs. XXVIII.—This was the case of a man of robust appearance whom Dr. Hérard had the kindness to show us and concerning whom he gave us the following information :—

“This patient was attacked several years ago by well-marked syphilis. He entered the Hôtel-Dieu in 1861 with numerous exostoses. While in hospital, he was seized with epileptic convulsions and since that time his speech has remained impaired as in general paralysis.

“Having afterwards been admitted into the Hospital Lariboisière, his speech was found to be slow and difficult, without notable paralysis; there was occasional ascites, emaciation, cachexia, torpidity of mind, and several attacks of erysipelas under which he sank.”

At the obliging request of Dr. Hérard and of his house-surgeon M. Ranvier, the post-mortem was made by us thirty-six hours after death.

Post-mortem examination.—Numerous ecchymoses on the surface of the skin invaded by the erysipelas.

Abdominal cavity.—The anterior abdominal wall was adherent in its whole extent to the convolutions of the intestines, which were also joined

* Compare : Murchison, *Syphilitic affection of the liver, peritoneum and dura mater*. *Lancet*, November 30th, 1861. E. Wagner, *Archiv der Heilkunde*, 1863.

to each other so as to form a single mass. These different parts were united by false membranes which were rather rough, resistant, whitish, and apparently of long standing.

The liver was, as it were, lost in the midst of the pseudo-membranous products; it no longer retained its usual form. The right lobe, which was smaller than natural, presented several depressions on its convex surface (fig. 1); its consistence was firm, its colour dull yellow, its sur-



FIG. 1.—A, right lobe of liver; a, left lobe; b, gall-bladder; c, cicatrix with depression of surface; d, cicatrix of surface of liver; e, suspensory ligament ($\frac{1}{4}$ of size).

face shagreened. On section there were seen radiating, resistant cicatrices, consisting of a fibro-vascular tissue, which appeared ecchymosed at certain points, and from which proceeded fibrous prolongations (figs. 2 and 3). The hepatic cells were wanting at several points. The lesser lobe and portal eminences were reduced to a strip of a fibrous and lardaceous-



FIG. 2.—c', vertical section of cicatrix seen at c (fig. 1).



FIG. 3.—A A', cicatrices in thickness of hepatic substance itself.

looking tissue about two inches in length and from $\frac{3}{8}$ to $\frac{1}{2}$ of an inch in thickness. On a closer examination it was found to be the fibrous net-

work of the liver which was most changed, which change was revealed by the presence of cicatrices and by a characteristic deformation.

The trunk of the portal vein and most of its branches were almost entirely obliterated by false membranes or fibrous cords studded with black patches due to the colouring matter of the blood. The walls are thickened and vascular at several points, which suggests the idea of a phlebitis resulting from the same cause which produced the change in the liver.

Spleen.—This organ was adherent to the parts around it; its capsule, thickened at several points, presented here and there milky patches from which proceeded small fibrous prolongations.

The mesenteric glands were large, pretty firm, and whitish in the vicinity of the liver and pancreas; others were larger, softer, and of a reddish colour, and it was especially in the pelvic region that these glands were manifested changed in volume, consistence, and colour.

The thyroid was hypertrophied.

The pancreas was small and indurated.

The kidneys, increased in size, showed slight amyloid degeneration.

The testicles, lastly, were reduced in size by one-half, the spermatic ducts were changed and mostly of a deep yellow colour.

Thoracic cavity.—The lungs were oedematous at their bases. At the right apex was found a cretaceous deposit, the size of a pea; other similar deposits were observed on the surface of the lobes.

A greatly enlarged thoracic gland rested upon the diaphragm.

Head.—The bones of the cranium were somewhat thickened and friable. The healthy dura mater adhered, at one point, to the cerebral substance. On the pia mater were some milky patches. The cerebro-spinal fluid was abundant.

The cerebral substance was normal-looking and did not appear changed, but at the point of adhesion to the dura mater was found a small cavity which admitted the end of the thumb, and which contained a yellowish fluid; all round this spot, the brain was yellowish and softened, further off, it was reddish and very vascular. The yellow substance consisted of abundant fatty granulations and of granular corpuscles probably of conjunctive origin. The nerve elements of the grey substance were changed, the tubes destroyed or broken. In other parts, the conjunctive element had undergone a notable hyperplasia, although the eye alone would scarcely lead to the suspicion of this anatomical derangement.*

This case requires no commentary, the syphilitic infection is evident, not only from the antecedents of the patient, but also from the peculiar characters of the changes met with at the post-mortem examination. It remains to be known whether, like the cicatricial deformities of the liver and the lesion of the brain, the peritonitis is

* This case was published in the *Gaz. Hebdomadaire*, p. 59, 1864.

to be attributed to syphilis. In my opinion, there can be no doubt on this point when we remember how frequently perihepatitis occurs in cases of syphilis of the liver, and when on the other hand there was no cause which could explain otherwise the production of that affection.

One point of pathological physiology is to be noticed in this case to which we shall have occasion to refer, viz., the absence of ascites, notwithstanding the almost complete obliteration of the portal vein. This exceptional phenomenon appears to us to find its explanation chiefly in the adhesion of the anterior abdominal wall to the intestinal mass, or even to the vertebral column; but it may be supposed, moreover, that the false membranes, the organisation of which was perfect, might well have contributed to the absorption of the serum previously poured out.

We shall still have to point out several times the existence of peritonitis in cases of visceral syphilis. But whether partial or general, this peritonitis always presents itself with the same characters as in the foregoing observation. Suppuration is not observed any more when syphilis attacks a serous membrane than when it invades another tissue. There has not as yet been any case to prove that acute peritonitis has ever supervened under these conditions. It is still a matter of hypothesis whether the softened substance of a gummy tumour in the liver has ever been poured into the peritoneal cavity and produced inflammation of that membrane.

Tubercular peritonitis and certain cases of chronic membranous peritonitis, such as those which may be connected with the abuse of spirituous liquors, are not without analogy to syphilitic peritonitis. The ascites, in all these cases, may cease to exist at a certain moment; but if the symptomatic derangements be little dissimilar, let it be borne in mind that the commemorative signs and concomitant disorders are always different. In fact, if the liver and spleen are generally increased in size in cases of syphilitic peritonitis, it is the lungs which are most frequently diseased in tubercular peritonitis, while in alcoholic peritonitis there are generally observed gastric catarrh, cramps, tingling, and anaesthesia at the extremities of the limbs.

ARTICLE V.—APPARATUS OF HÆMOPOIESIS.

We group under this head syphilitic lesions of organs all of which concur in the formation of the blood. This community of function

would suffice already to justify such an arrangement; but that which has especially led to its adoption is the usually simultaneous change in several of those organs, a change which is always followed by anæmia, or rather by the syndroma known under the name of cachexia.

The liver and the vascular blood-glands are, moreover, especially predisposed to undergo the influence of syphilis at this period of its evolution, and for that reason it is desirable to include in one and the same chapter the study of the changes which occur in them.

§ 1. *Syphilitic affections of the liver.*

Ricord, Clinique iconographique de l'Hôpital des vénériens. Paris, 1842. *Rayer*, Traité des maladies des reins, t. ii. p. 486, 1837. *Dittrich*, Prager Vierteljahrschrift, 1849, t. i. p. 1; et 1850, t. ii. p. 33. Analyse dans *Annals des malad. de la peau, &c.*, t. iii. p. 245. *Gubler*, Mémoire sur une nouvelle affection du foie liée à la syphilis héréditaire chez les enfants du premier âge. *Gaz. méd. de Paris*, 1852, et Mémoires de la Société de Biologie, t. iv. p. 25. *Quélet*, Essai sur la syphilis du foie. Thèse de Strasbourg, 1856. *Schulzenberger*, Dans *Gazette hebdom. de méd. et de chirurg.*, 1857, p. 279. *Lecontour*, Des affections syphilitiques du foie. Thèse de Paris, 1858. *Wilks*, *The Lancet*, Jan., 1857, and June 12, 1858. *Budd*, On the diseases of the liver, 2nd edit., 1857, p. 416. *Abelin* et *Duben*, Foie syphilitique. *Dublin Med. Press*, No. 1074, 1860. *R. Virchow*, La syphilis constitutionnelle, trad. franç. de P. Picard. Paris, 1860. *Leudet*, Recherches cliniques pour servir à l'histoire de lésions viscérales de la syphilis. *Moniteur des sciences médicales*, 1860, p. 1131. *Fr. Keesbacher*, Lebersyphilis. *Wiener Wochenblatt*, xvii. No. 36. *Murchison*, Syphilitic disease of the liver and diaphragm and dura mater. *Lancet*, t. ii. 1861. *Heschl*, Zur Kenntniss der syphilit. Leberaffection. *Cesterr. Zeitschrift für praktisch. Heilkunde*, March, 1862, Nos. 10 and 12, t. viii.; and *Schmidt's Jahrbücher*, t. 118, p. 43. *H. Biermer*, Ueber Syphilis der Leber und Milz, in *Casuistische Mittheilungen, &c.* *Schweitz*, *Zeitschrift für Heilkunde*, i. 1 and 2, p. 118, 1862. *Lancereaux*, Sur les cicatrices du foie. *Bulletin de la Soc. anat. de Paris*, t. xxxvii. p. 33, July and Aug., 1862. *Samuel Wilks*, On the syphilitic affections of internal organs, in *Guy's Hospital Reports*, 1863. *Ernest Faligan*, Des affections syphilitiques du foie, 1863. *Oppolzer*, Syphilis der Leber. *Wien. Med. Halle*. iv. 10, 24, 26, 27, 1863; and *Schmidt's Jahrbücher*, tt. 120 and 124. *Hérard*, De la Syphilis du foie, *Union méd.*, May 31, p. 400, 1864. *L. R. Haldane*, Case of cirrhosis of the liver with syphilitic deposit. *Edinburgh Med. Journ.*, 1864. *Stewart*, Syphilitic affections of the liver. *Brit. Rev.*, xxxiv. p. 512, October. *Lancereaux*, Des lésions viscérales syphilitiques. *Gaz. hebdom. de méd. et de chirurg.*, 1864.

The idea that the liver may participate in the derangements which

the syphilitic poison occasions in the organism is certainly not new. It obtained already amongst the first syphilographers, but they were far from being all agreed as to the changes which the hepatic gland undergoes under these circumstances. Some regarded syphilis of the liver as a consecutive lesion, amongst which number were Jac. Cataneus, G. Vella, and A. Ferro.* Others, on the contrary, looked upon the liver as the chief focus of the disease, for instance Ant. Musa Brassavole, and later Montanus, Ant. Gallus,† Fallopius,‡ Ranchin,§ and G. Keil.|| This latter opinion was difficult to uphold and vanished as soon as pathological anatomy became better understood, from which moment hypotheses had to yield to facts.

In the last century and even during the first years of the present one, some observers, and especially Bonnet¶ Astruc,** Baader,†† Van Swieten,‡‡ Cirillo,§§ and Portal,||| related cases, incomplete it is true, of hepatic affections connected with syphilis; but these cases had fallen into oblivion when Ricord and Rayer directed the attention of observers afresh to the syphilitic lesions of the liver. More recently, Dittrich, of Prague, and Gubler have carefully studied the same changes, the one in adults, the other in children. Within the last few years also, several interesting observations have been made on the same subject, in England by Wilks¶¶ and Bristowe;*** in Germany by Virchow, Frerichs,††† and Oppolzer; in France by Dufour,‡‡‡ Leudrit, Hérard, and Proust; §§§§ in Switzerland by Biermer. The time appears now to have come for collating the scattered facts, for grouping and co-ordinating them, and

* See Aloys Luisinus, *Aphrodis.*, pp. 151, 207, 433.

† See *Aphrodisiacus*, pp. 455, 554, 658.

‡ *Tractatus de morbo Gallico*, caps. xii. xiii.

§ *An hepar sit in lue venerea pars vitio affecta*, 1604.

|| *Dissertatio inauguralis de lue venerea. Marpurgi*, 1614.

¶ *Sepulchretum*. ** *Loc. cit.*, p. 96, t. iv.

†† See Van Swieten, *Comment. in Boerhaav. Aphorism.*, t. v. p. 371. Paris, 1773.

‡‡ *Ibid.*

§§ *Traité complet des malad. vénér.* Paris, 1803, p. 136.

||| *Maladies du foie.* Paris, 1813.

¶¶ *Transact. of Patholog. Society*, t. vii. and *loc. cit.*

*** *Ibid.*, t. x.

††† *Traité de Malad. du foie*, 1^{re} édit., 1862; 2^e édit., trad. franç. Paris, 1866.

§§§ *Bull. Soc. anat.*, 1851.

§§§ *Ibid.*, p. 459, 1862.

for endeavouring to draw from them general inferences in reference to the diagnosis and prognosis. To accomplish this difficult task, we shall add to the labours of our predecessors the researches which we ourselves have made.

ANATOMICAL STUDY.

Looked at in an anatomical point of view, syphilitic affections of the liver present modalities or forms with which it is necessary to be well acquainted for the comprehension of their various symptoms. Inflammatory form, or interstitial hepatitis, gummy form, consecutive cicatrices; such are the distinct modifications which we have to study, for if they coexist in certain cases, in others they are completely isolated.

Interstitial syphilitic hepatitis.—Syphilitic cirrhosis.—Much more rare than the gummy change, syphilitic cirrhosis occupies sometimes a part only, sometimes the whole of the hepatic gland. Like syphilitic orchitis, it appears to be characterised, at its commencement, by a vascular injection to which succeed, at various points, nuclei and plasmatic cells which soon form a new tissue possessing the characters of fibrous tissue and having for its more especial seat the fibrous capsule and the septa emanating from it. A first effect of this multiplication of the connective elements, the usual starting-point of which is the wall of the capillaries, consists in a thickening of the web and consequently in a greater or less, but generally inconsiderable, augmentation of the volume of the liver. After a certain time, when these elements have acquired a complete development, the state of things becomes changed, by virtue of the retractile properties inherent in this new tissue as in all the cicatricial tissues. The surface of the liver presents at several points furrows more or less deep, and which, by their arrangement and by the deformity which they occasion, do not fail to give to the gland a certain stamp of speciality. The liver, in fact, adheres by the aid of resistant bridles or ligamentous cords to the diaphragm; often also, but less frequently, to the neighbouring organs, to the suprarenal capsule and to the kidney in particular, so that it is often very difficult to extract it from the abdominal cavity. Its edges are aufractuous, irregular, not to be recognised; its uneven, indented surfaces are ploughed up by numerous furrows which, most fre-

quently, radiate from the suspensory ligament, and at the bottom of which there exists a resistant fibrous tissue.

In consequence of this arrangement, the surface of the hepatic gland presents a lobulated appearance and a certain resemblance to that of the kidney of a young calf. On section, there are seen to proceed from the bottom of the furrows prolongations which circumscribe islets more or less extensive, but in general of several centimeters in diameter, which gives to the interior of the gland a mammillated appearance similar to that of its surface. The hepatic substance between the fibrous septa is more or less changed; its consistence is usually firm; its colour is darker or a little yellowish, according to the more or less advanced degree of change in the hepatic cells.

The capsule of Glisson and the septa proceeding from it are the more especial seat of the syphilitic lesion, and it is their retraction more than anything else which give to the liver its peculiar form. On examination with the microscope, it is found that the thickening of these parts results from the formation of new elements of connective tissue, nuclei, cells, and fibres. The hepatic cells, most frequently simultaneously affected, rarely retain their normal dimensions; they are larger than natural and filled with fat, or, more rarely, they have undergone, at the same time as the walls of the capillaries, amyloid degeneration. In general, they are atrophied in the neighbourhood of the fibrous septa, while elsewhere they are either normal or augmented in volume.

Such is the condition of the liver in the various phases of syphilitic hepatitis; little distinct at its commencement, this lesion presents, later on, characters which leave little difficulty in the recognition of it.

Alcoholic cirrhosis, which most resembles it, does not present the enormous lobules which give to syphilitic cirrhosis the appearance of the kidneys of young animals; neither does it show, on section, those vast islets separated by fibrous septa, but it consists of granulations which are usually small and often of equal size, and form in the thickness of the parenchyma small yellow or brownish prominent grains of the size of a grape-seed. This arrangement is connected with the seat of the proliferation, which, in drunkards, occurs chiefly in the portal veins. The capsule itself is generally very little thickened; never, moreover, is it ploughed up by deep furrows, and rarely

does it adhere to the neighbouring organs. The difference, therefore, is most manifest.

The cirrhosis which is sometimes observed in copper-smelters is easily distinguished from the two preceding varieties.*

In the affection of the liver resulting from the obstruction to the circulation occasioned by cardiac affections, that organ, which is indurated, firm, smooth on the surface, and of a yellowish tint dotted with black (nutmeg liver), never presents the fibrous thickenings of syphilitic cirrhosis.

The facts which serve as the basis of this description are already numerous; but as it would be too long to give them with all their details, we shall content ourselves with giving a short summary, or merely the indication of the chief of them, giving *in extenso* only the following case.

Syphilitic cachexia, pneumonia, and phlegmon in the arm; erysipelas, death.
—*Change in the lungs.*—*Waxy degeneration of wall of left ventricle; deep furrows on surface of liver; thickened fibrous septa (interstitial hepatitis); renal and splenic lesions, hypertrophy of thyroid.*

OBS. XXIX.—F., a widow aged 47, hawker, entered la Pitié April 15th, 1861. Although strongly built, this woman presented a yellowish colour, most marked on the face and limbs. She was emaciated and had been suffering for a long time. She complained of violent pain in the right side of the chest and towards the spine of the scapula on the same side. There were dulness and crepitant râles on auscultation.

April 16th, to the dulness and crepitant râles was added a slight blowing sound. The expectoration was scanty, greenish, viscoous, and adherent to the sides of the vessel. There was dyspnoea, a feeling of uneasiness, a small and frequent pulse and very little heat of skin.—She was bled to eight ounces and a flying blister was applied between the shoulders. The next few days she continued in the same state, but the blowing sound was more distinct. April 20th, the expectoration lost its viscosity and its colour and was in small quantity only. Despite this apparent improvement, we were struck by her cachectic appearance, the coldness of the extremities, and the smallness of the pulse, phenomena which appeared little in accordance with the physical condition of the lungs.

April 27th, the moist râles have in a great measure ceased; a phlegmon developed by the bleeding from the arm had almost entirely disappeared, when erysipelas supervened which spread to the breast and trunk and caused death in three days.

* See for this lesion the article Alcoholism which we have published in the *Dictionn. encyclopédique des Sciences Médicales*, t. ii. p. 635.

Post-mortem examination.—No decomposition; body emaciated. The lower extremities were the seat of a soft œdema which extended as far as the upper part of the thighs; the femoral veins were free from coagula; the skin was of a yellowish colour. At three centimeters from the vulva, upon the upper and internal part of the left thigh, there existed a large, circular cicatrix, slightly depressed, and from two to three centimeters in extent. Between the anus and the vulva, near the raphe, were found several other hard, whitish, and slightly prominent cicatrices. Like the preceding, they were wrinkled, and circular in shape, characters which sufficiently point out their origin.

The brain and its coverings were not sensibly changed.

The thyroid was the size of a goose's-egg and waxy in appearance.

Thoracic cavity.—Slight serous effusion at the lower part of the right pleural cavity. The corresponding lung had lost its elasticity and permeability; its condition resembled that known under the name of carnification. At the apex, the seat of the pneumonia, there was induration connected with the hyperplasia of the conjunctive tissue. There were some adhesions on the left side; the lung on that side presented at its base a change less considerable but differing little from the preceding; at some points, however, were seen whitish lines, the cutaneous indication of a thickening of the web of the conjunctive substance.

The pericardium was healthy, but beneath its visceral layer, on the surface of the heart, several small yellowish spots were observed. The cavity of the left ventricle was a little dilated; its wall was $\frac{1}{2}$ of an inch in thickness. The surface of a section was smooth and polished, with a waxy or lardaceous appearance. Of a brownish yellow colour, this wall was resistant to pressure and presented at some points whitish patches, in the neighbourhood of which were found only fibres of conjunctive tissue. The right side of the heart appeared healthy. Covered with a slight layer of fat, it contained a fibrous coagulum, soft and of recent formation. The valves of the right side of the heart were healthy; on the left side, the aortic valves were thickened and indurated at their base, and several vegetations were met with on the surface of the mitral valve. The arch of the aorta was dilated and on its surface were seen several disseminated yellow patches. Microscopical examination of the tissue of the heart showed a thickening of the fibrous web, strongly marked at some points. Some of the muscular fibres were smooth, shining and refracting; others presented a granular change commencing at their central portion; a certain number of them appeared to be intact.

Abdominal cavity.—The liver was adherent to the diaphragm in a great part of its extent and difficult to separate from it on account of the long standing and closeness of the adhesions. These adhesions also united the liver closely to the right side of the heart. When taken out of the abdomen, the liver was remarkable for the irregularity of its surface; it was, in fact, traversed by numerous, deep furrows, which divided it into a great number of lobules, and gave it an appearance very similar to that of the kidneys of young animals. These furrows, which were from $\frac{1}{2}$ to $\frac{1}{4}$ of an inch in depth occupied the right lobe and neighbourhood of the ligament,

There were not with or with surfaces of the organ, but chiefly on the anterior surface. The left lobe was diminished in size and so diminished in its lower surface as to be no longer recognisable. The right lobe measured from apex to base inches in each direction: its form was greatly changed and it was far from easy to distinguish its various parts.

The spleen measured like the surfaces very long fissures, some of which were filled in by fibrous tissue. The vessels of the liver were free and distinct: a section of the organ showed a thickening of the fibrous septa so considerable as to amount to about $\frac{1}{2}$ of an inch: these septa were whitened and contained a greater or less number of nodules and it was in their formation that was due the very peculiar appearance of the liver. The parenchyma contained between these septa which were formed about a third of connective tissue and of fatty granulations more or less abundant at some points was of a slightly yellowish colour. Some of the septulae were atrophied and granular while others had preserved an integrity more or less evident. Some were increased in size and contained abundant fatty granulations. Apart from some reddish bodies due to the staining matter of the ink, the connective tissue which accompanies the ramifications of the portal vein did not appear to be changed and this circumstance explains, as it appears to me, the absence of fat in the peritoneal cavity.

The spleen measured $\frac{1}{2}$ of an inch in length by $\frac{1}{4}$ in breadth: less freely adherent to the diaphragm than was the liver, it also adhered to the surface of the corresponding side: its external covering was thickened about the middle portion where a large white patch existed. Several venous patches, hæmorrhagic infarcts, were observed on its surface. The colour of the peritoneum was yellowish.

The glands presented two different aspects: in the left groin, in the neighbourhood of the incision already mentioned, they are twice or three times the natural size and pearly-looking: the same is the case in the right groin. The glands situated in front of the vertebral column are somewhat less enlarged and of a yellowish or brownish colour.

Slightly yellow in colour, the kidneys are the seat of a marked change and of depression with an indurated base, analogous to cicatrices more or less deep and extensive. Larger and less depressed than the right, the left kidney presented on section a smooth, non-granular surface, traversed by vessels gorged with blood in the neighbourhood of the cortical substance. On examination with the microscope, the web of conjunctive substance was seen to be thickened (hyperplasia), especially in the neighbourhood of the Malpighian bodies, which were, for the most part, small and atrophied. Some of the tubes were atrophied, others contained epithelial cells charged and loaded with fatty granulations.*

* Case published by us in *Gaz. hebdomad. de méd. et de chirurg.*, p. 547, 1864.

Observed at a period in which the syphilitic manifestations of the viscera occupied very little of the attention of clinical observers, this case does not make mention of the pathological antecedents of the patient, and does not permit of tracing the filiation of the syphilitic symptoms. Two circumstances, however, lead here to the admission of the existence of syphilis: the presence of cicatrices peculiar to the region of the perineum and a cachectic condition which there was nothing else to explain. This first point accepted, is it to syphilis that are to be attributed the anatomical lesions met with at the post-mortem examination? Facts alone can answer a question of this nature. But the following observations, coupled with the preceding, are in this respect entirely conclusive.

A woman, aged 42, complained of vague pains in the abdomen, indigestion, loss of appetite and constipation. She presented at the same time an icterus little marked in the skin, but distinct in the sclerotic; the liver, increased in size, presented considerable indentations to the touch. Later on, cephalalgia, amaurosis, convulsions, delirium and coma supervened, symptoms which were soon followed by death.

In addition to a change in the bones of the cranium and a gummy tubercle situated in the pituitary body, the liver presented the following appearances:—Somewhat enlarged in size, it projected beyond the ribs on the right side; on the left, it did not pass the median line; it adhered by thick membranous bridges to the whole corresponding portion of the diaphragm; the organ presented a lobulated aspect altogether peculiar; its surface, in fact, was marked by numerous furrows and by dents of greater or less extent evidently due to the retraction of the fibrous septa thrown out by the thickened capsule in the substance of the parenchyma of the liver. The latter, pretty normal in colour, appeared compressed like the vessels and ducts proceeding from it. The peritoneum contained but little fluid; most of the vascular blood glands were increased in size.*

In several observations furnished by Frerichs (Obs. LX., LXI., and LXXI.), we find the same adhesions of the liver to the diaphragm and neighbouring organs, the same change in form, the same lobulated condition with increase or diminution in the size of the

* L. Gros and Lancereaux, *Affections nerveuses syphilitiques*, 1861, p. 246, Obs. CXXIV.

described in recent times. We read already in Cirillo:—"If the liver becomes indurated and acquires an inordinate size, the substance of which it is composed usually appears as if covered with small, round grains distinct from each other, it is yellow and very hard internally; on section, small solid bodies are felt under the knife, analogous to grains of fine sand."

Ricord directs attention especially to these products, which he compares to gummy tubercle of the cellular tissue. The following is the description which he gives of them in a case which he saw and reported in his *Clinique Iconographique*:—"The liver, of medium size and usual colour and consistence, presents on the convex surface of its right lobe a tumour irregularly rounded, of the size of a walnut, slightly prominent, but almost entirely sunk in the substance of the organ. This tumour, which was divided into two parts, appeared to be surrounded by a kind of cyst; it was formed of a hard and dense, pretty homogeneous tissue, which creaked slightly under the knife, and presented no trace of vessels. It appeared very analogous to certain tubercles of the cellular tissue frequently met with in tertiary syphilis." An ulcer of the larynx, with disease of the thyroid cartilage and clavicle, were the circumstances which, combined with the specific antecedents of the patient, pleaded in favour of the syphilitic origin of the hepatic affection.

In a paragraph which serves as an appendix to cancer of the liver and entitled: *Encysted knotty tumours of the liver*, Dr. Budd* has given unintentionally an excellent description of gummy tumours of the liver. The characters of the hepatic change, the encysted condition, the appearance and cheesy consistence, as well as the anatomical constitution of the tumours which he describes, are so many conditions which, even in the absence of any mention of syphilitic antecedents, leave no doubt concerning the real origin of an affection which the author himself has great difficulty in placing satisfactorily in the list of known diseases. Wishing to give an interpretation to these facts, he was led to assume in this change a dilatation of the hepatic ducts by the presence of the colouring matter of the bile in the centre of the nodes disseminated in the liver. But, as we shall soon see, this peculiarity, which frequently belongs to syphilitic tubercles of the liver, finds its explanation in the circumstance that the hepatic ducts or the tissue in the neighbour-

* *Diseases of the liver*, p. 416, 2nd edit. London, 1857.

hood of them are sometimes the primary seat, the starting-point of the gummy change (see Obs. XXV.).

Dittrich of Prague* and Wilks† have the merit of having made known the causal relation which exists between the tumours pointed out above and constitutional syphilis.

In the cases furnished by those authors, the liver, which adheres to the diaphragm, presents in the thickness of its parenchyma tumours more or less numerous, of varying size, formed of a yellowish white substance more opaque at the centre and enveloped in a tissue more recent and transparent, composed of fibres of conjunctive tissue and fusiform cells. In some of these cases there is question also of cicatrices met with upon the surface of the liver. Virchow's work contains similar cases; tubercles or nodosities of a yellowish white colour, dry and surrounded by a yellowish, callous or tendinous cicatricial tissue existing in the thickness of the hepatic gland in individuals affected with syphilis.

Frerichs gives a case of the same kind with deep depressions of the surface of the liver. Bristowe‡ and Meyer,§ and more recently Biermer and Wagner, have seen the same changes which we have several times had the opportunity of observing and which we did not hesitate to attribute to syphilis at a time when we were not yet acquainted with foreign works on this point of specific pathology. In fact, ever since 1859, we have made known to the Biological Society the result of our researches on this subject.

In at least half the cases in question, the liver, being the seat of gummy nodes, has formed, especially in the neighbourhood of the new growths, solid and resistant adhesions to the organs in its vicinity, and particularly to the diaphragm. This is, as we would point out at once, a character which may serve to distinguish this change from the cancerous affections, in which these adhesions are only seen exceptionally. The surface of the organ is generally traversed by cicatricial furrows, and by depressions of greater or less depth; its volume, normal in some cases, is at other times diminished, more frequently increased, and these changes result on one hand from the

* *Loc. cit.*

† *Transact. of Path. Soc. of London*, Vols. VIII. and IX. *Med. Times*, July 3rd, 1858, January 10th, 1857. *Gaz. Hebd.*, p. 142, 1859.

‡ *Transact. of Path. Soc. of London*, Vol. X.

§ Schmidt's *Jahresb.*, t. cxiv.

retraction occasioned by the softening and absorption of the gummy tumours, on the other hand from the greater or less accumulation of fatty or amyloid substances in the midst of the hepatic parenchyma, and in the thickness of the cells and of the walls of the vessels.

As for the tumours or nodes, they are usually multiple and deep-seated; sometimes, being more superficial, they form a prominence beneath the capsule. Most frequently rounded and varying in size from a millet-seed to a pea, a nut, a walnut, or even an egg, they present, in certain cases, the form of a lentil or a bean; their colour is whitish, greyish or yellowish, their consistence firm or a little soft, according to the relative proportion of the elements of which they are formed and especially to the more or less advanced degree of ascending or descending evolution of those elements. On section, gummy tumours of the liver sometimes present a dry, elastic surface, projecting beyond the neighbouring tissue, whereby they are distinguished from cancer; sometimes, in their retrograde period, they have the appearance of a kind of magma, whence there occasionally escapes a milky-looking fluid.

Whether dispersed upon the surface or more deeply seated in the liver, and agglomerated at one or several points of the organ, these neoplasms are remarkable by an arrangement which is rarely wanting, and which, on that account, constitutes one of their principal characteristics. They are, in fact, generally surrounded and circumscribed by a thick retractile zone, always less prominent on section than the nodosity itself. Composed of a greyish and vascular fibrous tissue, this zone, when there is an agglomeration of the tumours, forms as it were so many cavities with resistant walls in which is contained the tuberculoid mass which it is sometimes possible to enucleate.

It is difficult to determine precisely the period at which this zone appears in reference to the gummy nodes properly speaking; but it would be wrong to regard this fibrous circle as a simple condensation of the web of the liver resulting from the compression of the hepatic cells by the gummy deposits. In fact, there are found in it vessels, nuclei, corpuscles and fibres of conjunctive tissue. The central yellow substance, on the contrary, is generally little or not at all vascular, and composed of small cells and round nuclei, agglomerated in a fibrous web. In proportion as we examine portions situated nearer the centre of the tumour, we observe the same elements infil-

trated with fatty granulations undergoing molecular destruction; at the centre itself there are only granulations which, in some cases, form a kind of emulsion in which we have once observed the presence of crystals of cholesterine.

To sum up, gummy tumours of the liver are, so to speak, composed of two parts, the one central, which is generally yellowish and undergoes all the whole series of metamorphoses proper to these neoplasms, which I incline to call still-born; the other, peripheric, greyish, resistant, fibrous, continues to live, behaves after the manner of cicatricial tissue, and contributes, doubtless, to favour the absorption of the metamorphosed elements. Thus are explained the numerous varieties of these tumours, the possibility of their complete disappearance, the retraction and deep depressions, and lastly the very characteristic deformity of the liver in the neighbourhood where they existed primarily. It is no doubt difficult to determine precisely the time which these products require to pass through the various phases of their evolution; but this time does not appear to be very long, for if we rely upon some cases observed by ourselves, it does not always exceed a year. There are cases, however, in which, by virtue of particular circumstances, these neoplasms are invaded, like most of the fibrous tissues of new formation, by salts of lime, and undergo a true petrification. In one of the cases given further on will be found an example of this modification of gummy tumours; carbonate of lime was abundant in it. It is easy to understand that absorption is then no longer possible, and that the calcified product must remain indefinitely in the organ affected. Such is evidently the origin and such the mode of formation of some at least of the stony concretions found in the liver by some authors,* and which, according to Méral, are usually enveloped in a fibrous cyst.

For a long time, the change which we are now considering was confounded with tubercle and cancer of the liver. Oppolzer and Bockdalek regarded the gummy nodosities and the cicatricial depressions which follow them as cured cancers, until Dittrich, of Prague, succeeded in demonstrating their syphilitic origin by means of the anatomical preparations and observations of those authors themselves.

Distinct characters separate these two forms of disease. We have

* Morgagni, *Epist.* xxxviii. No. 52. Blanchi, p. 56; *Compendium de médecine*, p. 101.

already said that a cancerous liver does not adhere in the same way to the neighbouring organs as a syphilitic liver. If it is deformed by the knobs due to the prominence of the cancerous tumours, it does not generally present cicatrices either in its substance or on its surface. The cancerous tumour differs, moreover, manifestly from the syphilitic nodosities of the liver; surrounded by the tissue of the organ itself, it is not, like the gummy tumour, circumscribed by a thick, greyish, fibrous zone; it affects also in a good many cases, a chestnut shape, with a central depression, and is thus distinguished from the globular syphilitic tumour; it is, further, very vascular, while the latter is scarcely so at all. These differences belong in a more especial manner to mixed cancers or to those which have their starting-point in a modification of the conjunctive substance. Epithelial cancer, even when it presents itself in the form of rounded, globular, somewhat soft or encysted masses, is easily recognised by the nature of the elements which enter into its composition (cylindrical epithelia).

Tubercles of the liver, so rare in the adult that Cruveilhier has never met with them in the numerous cases of pulmonary and abdominal phthisis which he has had the opportunity of examining, are sometimes met with in infants. They show themselves under two different aspects: sometimes it is greyish and transparent miliary granulations, at other times yellowish nuclei of the size of a lentil or a pea; but it is generally easy to distinguish them from gummy tumours by their usual coexistence with lesions of the same nature in other organs and especially in the lungs. As regards the non-syphilitic tubercular masses said to have been seen in the liver, it must be admitted that their existence is at least very doubtful, and one is inclined to ask whether they have not given rise to an error. Amongst the few observations known to us on this subject there is one furnished by Rilliet and Barthez,* in which, even in the absence of syphilitic antecedents, the knobs upon the liver, the diminution in size of the organ, and the cellular lesions of its surface are so many characters which appear to plead in favour of a syphilitic rather than of a tubercular affection. There is still more reason for attributing to an affection of the same origin a case published in the *Gazette des hôpitaux*,† under the title of tuberculation with cirrhose shrivelling

* *Traité des malad. des enfants*, t. iii., 2^e édit., 1853, p. 846.

† *Gaz. des hôpitaux*, No. 17, February 10th, 1863.

of the liver: the irregularities, bridles, fibrous bands and knobs described on the surface of the organ, the tubercular masses grouped together at one point, are, in fact, so many characters met with again in most of our cases in which a syphilitic origin is beyond all doubt. It remains for us to separate from gummy tumours the fibrous tumours of the liver; but these tumours are, in reality, very rare: in the only case which has come under our observation, there existed in the substance of the organ an enormous fibrous mass incrustated with salts of lime, and in the vicinity tumours smaller but nevertheless differing from gummy tumours by their uniform, greyish or pink colour, their vascularity, and the everywhere equal development of their elements.

Chancre eight years ago; amaurosis, epileptiform attacks; contractions with semi-paralysis of left arm and leg.—After a final attack, coma.—Death.—Post-mortem examination.—Serous cyst of anterior of right lobe.—Atrophy of corpora geniculata and optic tracts.—Atrophy of left peduncle of brain and corresponding pyramid; same lesion of medullary bundle of opposite side.—Cicatrices on surface of liver and gummy tumours of that organ.

OBS. XXX.—B., aged 38, day-labourer, came into the Hospital la Pitié, Nov. 14th, 1861, under the care of M. Becquerel and Dr. Triboulet, to whose kindness I owe the history of this patient, except as regards some anatomical and microscopical details which I was enabled to obtain personally.

The patient was strong and robust-looking, thin, with a bronzed somewhat earthy colour of the skin. About eight years ago, he had a chancre at the junction of the glans and prepuce, the cicatrix of which is still visible. He is not known to have had any secondary symptoms; but about a year after the primary lesion, the patient, whose recollections are rather vague, appears to have been seized almost at the same time with amaurosis, contraction, and also very probably epileptiform attacks. He was then taken into the poor-house of Saint-Denis, where he was considered to be an epileptic, which shows that he must several times have had epileptiform symptoms; the information given to Dr. Triboulet never enabled him to ascertain the existence of previous apoplectic symptoms.

On admission, this patient had the fore-arm bent upon the arm and kept in that position by a marked contraction of the biceps; this contraction, which it was possible to overcome, recurred immediately. The left foot was also extended and turned outwards, the tendo Achillis standing out like a cord; there was no contraction of the fingers or toes, nor yet complete paralysis, for the patient could move in various directions the arm, the fingers, and even the lower extremity; the contraction merely pre-

vented him from making use of them. The limbs had retained their normal appearance, with the exception, perhaps, of slight atrophy; sensibility was intact and palpation of the nerves of these parts gave no pain. The special senses were unimpaired, except the sight; the patient could not distinguish day from night, his eyes had the fixed look of amaurosis, with dilated pupils; at times, the eyes were agitated by a violent nystagmus, and both had a general tendency towards the left; the visual axes remained parallel so that there was no strabismus. Intelligence was quite perfect, the patient hearing, understanding, and answering correctly; he committed no extravagance, but he was low-spirited and spoke of his death as of a relief near at hand; he complained of frontal cephalalgia, but little intense and not having any special character.

His general health has been deranged for the last ten or fifteen days, he has lost his appetite, his tongue is covered with a thick yellowish fur, and his breath smells badly; the abdomen is soft, with free action of the bowels; his urine, which he passes easily, has a brick-dust sediment which disappears on the addition of nitric acid. He has febrile accessions, redoubled at night, and morning sweats.

Nothing abnormal in the vascular centres, or in the respiratory apparatus; everything is confined to two orders of facts:—

1st. Old symptoms consisting in complete amaurosis and a contraction, with semi-paralysis, of the left arm and leg. 2nd. Acute febrile attacks, redoubled at night, of ten to fifteen days' standing. During this examination we found, near the cleido-sternal articulation, a cutaneous ulcer with abrupt edges and a greyish floor, having all the appearance of ulcerated syphilitic gummy tumour; the bone was not laid bare; this circumstance was connected with well-marked alopecia, the pillow was covered with the patient's hair; an expectant treatment was ordered for a few days to give an opportunity of observing the case.

Nov. 17th.—This morning, for the first time since his admission, the patient complained of pain in the head; on the left side of the forehead he had pains which he compared to the gnawing of animals. He suffered less the following day, his skin was warm and moist, his pulse 100, full, his tongue covered with a thick yellowish fur, tremulous but put out straight. He was ordered an emetic.

19th.—Little vomiting but copious stools; the patient had suffered less last night than yesterday; those near him observed that he talked in his sleep.

The next morning, when seen, he had coma with trismus, his face drawn, and violent nystagmus; it seemed probable that he had had an attack of epilepsy before our arrival.

21st.—The epileptic attacks have recurred very frequently, running off to almost complete asphyxia; the patient remained in this condition for more than forty-eight hours unconscious and then died.

On opening the skull, at the moment of taking off the skull-cap after having broken it with the hammer as usual, a certain quantity of fluid issued in a jet; it was then seen that the anterior part of the right hemisphere was greatly depressed at that point. To remove the brain from

the cavity of the cranium, the dura mater was cut at the side of the longitudinal sinus, from before backwards; on the left side this manoeuvre was easy, but on the right it was possible posteriorly only, for in the neighbourhood of the anterior lobe the dura mater adhered; a part of this remained attached to the part where the anterior lobe should have been; this sunk portion appeared to form the superior wall of a cavity occupying the place of the anterior lobe and which had emptied itself. An incision made into this wall shows, in fact, an excavation which had destroyed the whole of the anterior lobe.

This excavation had for its superior, anterior, internal and external limits the dura mater scarcely lined by a thin layer of grey substance; below there remained a larger quantity of nerve substance; posteriorly there did not appear to be any septum of separation from the ventricle, but as the latter was neither dilated nor filled with fluid, it was evident that there must have been an intermediate septum, no doubt a serous one; further, a part of the posterior wall of the cavity was formed by substance of the hemisphere unchanged either in colour or consistence and merely appeared shining, as if covered by a kind of cystic serous membrane. It was easy, moreover, to see that the cavity thus substituted for the anterior lobe was a serous cyst, there was still one place at which there remained serum enveloped in a transparent serous membrane; this fluid was lemon-coloured and had all the appearances of ordinary limpid serum; there was no trace of echinococci. At the inner and upper part of the cavity, there was within and beneath the ventricle a sort of depression, which appeared to form a posterior cavity; this depression, also lined with cerebral substance, was covered by a kind of serous membrane and gave an idea of the manner in which the cavity had been developed by pushing back, separating, and atrophying the cerebral substance without eroding it.

The ventricle was healthy, independently of the cavity, only the septum lucidum was pushed somewhat inwards; the corpus striatum and optic thalamus of that side were intact. On examining the base of the brain, it was seen that the commissure and optic tracts were reduced to a kind of narrow, greyish, thin band, resembling at first sight an empty and flattened vessel; there was evident atrophy of those tracts and of the commissure. The corpora quadrigemina were small, the corpora geniculata had almost the same appearance, and all were but little prominent. We were struck by the comparative atrophy of the right peduncle of the brain, which was nearly one-third smaller than the left; the protuberance was less prominent on the right side, and the pyramid of the same side very manifestly smaller than that of the left; these parts appeared, however, to have their normal consistence.

The anterior medullary bundle of the left side appeared smaller than its fellow. The rest of the brain was healthy, the grey substance everywhere of a mottled red colour, the result of the recent asphyxia. Thus there were, a serous cyst in the anterior lobe, atrophy of the optic tracts, the corpora geniculata, the peduncle and pyramid of the right side and of the upper part of the left medullary bundle.

The spinal cord was not examined in the rest of its extent.

Thorax.—The lungs were healthy, and merely presented some adhesions; there were seen in them a great number of small hæmorrhagic points, disseminated in the parenchyma, but situated chiefly in the lower lobes. They were to the number of from twenty to twenty-five in each lung, in size somewhat larger than a lentil or a pea. These points were slightly granular on section. The heart and vessels were healthy; several yellow spots were found on the aorta. In the right heart there was a thin fibrinous clot.

Abdomen.—The testicles, bladder, and pancreas were healthy. The spleen was from twelve to fourteen centimeters in length; its thickness was increased in the same proportion; on section, it did not appear sensibly changed. Its tissue was brownish, of a normal consistence. Some of the mesenteric glands were enlarged and changed. In the kidneys were found small cysts large enough to hold a pea.

The liver was the organ which presented the most characteristic lesion: it was twenty-five centimeters in breadth, sixteen centimeters in height the right side, fourteen centimeters on the left; it was of a rather intense red colour and uniform, with the exception of some small mottled patches in the neighbourhood of the fissures and more especially of that corresponding to the gummy tumours. The under surface presented nothing peculiar in reference to its colour. Two longitudinal furrows were found upon it, one near the lesser lobe, the other upon the right lobe; both were very deep; they commenced at the adherent edge and terminated near the free edge. From these furrows proceeded others; one of these was one centimeter in depth. The floor of each of these furrows was somewhat more yellow than the rest of the organ; at another point on the under surface of the left lobe was found another furrow in the form of a star with three branches and altogether analogous to those which we are about to describe upon the convex surface. Upon this latter was seen, towards the middle of the right lobe, a star with three branches, forming deep furrows, the edges of which were united by fibrous bands; each of these branches was from one to three centimeters in length.

On the left lobe, at the side of the suspensory ligament, was found a depression which adhered to it by the aid of a false membrane. At its edges existed other small furrows, less deep than the preceding; but there was seen, moreover, a mottled, bluish patch, an incision made into which showed, in the substance of the hepatic parenchyma, three white tumours, of the size of a cherry-stone or nut, of the consistence of soft cheese. These tumours were separated from the hepatic parenchyma by a greyish conjunctive tissue; this same tissue was interposed between the tumours themselves, where it was of a slightly yellowish colour, very resistant, and creaking under the knife.

Microscopical examination.—*Encephalon.*—The greyish pink membrane which occupied the right anterior lobe of the brain was formed of a vascular conjunctive tissue with very fine fibres, in the midst of which were found some nuclear elements and proteic and fatty granulations without the least trace of hæmatine; in the neighbourhood existed fragments of

fibres and altered nerve cells. The grey matter of the convolutions enveloping a great part of this product, there is reason to suppose that its primary seat was the white matter, and probably the central part of the anterior lobe. The nerve fibres in the neighbourhood of the pyramids were atrophied, greyish, and somewhat granular. In the optic tracts there were granular globules, atrophy and fractures of the nerve fibres; also thickening of the web of the conjunctive substance of the optic nerves and change in the nerve fibres.

Gummy tumours of the liver.—These tumours were in an advanced stage of softening and yielded to the slightest pressure; pretty soft towards their centres, they were composed almost entirely of albuminous or fatty granulations towards their middle portion and of granular nuclei, some spherical, others ovoid or elliptical; at their periphery, lastly, there existed a fibroid web, amorphous matter, and granulations in less abundance.

These products were separated and circumscribed by rather fine conjunctive tissue, in the midst of which also were found fatty granulations; of the hepatic cells in the neighbourhood, some were atrophied, others increased in size and filled with fatty granulations. In the other parts of the organ, the hepatic cells also contained much fat and the fibrous web everywhere thickened.*

Gummy tumours present, in certain cases, a greater volume than in the preceding case. On the other hand, they are sometimes not larger than a millet-seed.

In a syphilitic woman observed by Dittrich, there were through the whole extent of both lobes of the liver, both on the surface and in its substance, partly in the neighbourhood of the portal vein, and partly at a distance from it, nuclei of the size of a millet-seed or a pea, round, grey, not enucleable, which consisted of organised fibrous tissue more or less hard and molecular at some points. The largest of these nuclei were soft at the centre, some were in a state of purulent metamorphosis.†

We now know what to think of the pretended metamorphosis of gummy tumours into pus; it is unnecessary to insist further on the point. The following case, which elucidates still further the characters proper to these tumours, shows us their coexistence with other lesions of the same nature.

* This case has already been published; see our paper on *l'amaurose liée à la dégénération secondaire des nerfs optiques* (*Archives de médecine*, Jan., 1864).

† Compare E. Wagner, *Archiv der Heilkunde*.

Gummy tumours of the liver and testicles.—Lesions of the kidneys.—Albuminuria.

OBS. XXXI.—B., aged 59, an optician and formerly a soldier, had been in Africa, where he contracted a chancre and had intermittent fever. Of average height and constitution, this man afterwards enjoyed tolerable health. It was difficult to ascertain distinctly whether he had had symptoms of constitutional syphilis. Having been admitted into the Hôtel-Dieu, April 4th, 1863, he complained of œdema of the lower extremities and progressive weakness and emaciation. His urine was found to be highly albuminous. A short time after, his abdomen became enlarged and an ascites supervened which soon assumed considerable proportions, without the liver appearing to be much altered in volume; the derangement of the digestive functions, which commenced with the disease, continued, and to the loss of appetite were added, during the last days of his life, diarrhœa and vomiting of a brownish fluid differing little from the black vomiting peculiar to cancer of the stomach. The œdema of the lower extremities increased and the distended skin became gangrenous in places. The emaciation continued, marasmus succeeded to the weakness and death occurred May 25th.

Post-mortem examination.—No well-marked cicatrices existed upon any part of the body. The brain and its membranes were healthy. The lungs presented at their apices a few tubercular masses the size of a small cherry.—The heart was intact. Several quarts of serum escaped from the peritoneal cavity. The liver adhered at some points to the diaphragm by means of thick and resistant false membranes and was slightly enlarged; at a short distance from its inferior edge, on the right of the suspensory ligament, there existed two wrinkled funnel-shaped cicatrices, and towards the upper half of the right lobe a slight swelling was observed. In the same neighbourhood, after separation from the diaphragm, some small, slightly prominent, yellowish tumours were seen. On making an incision into the organ, a larger number of these tumours was met with, some of which were isolated, others agglomerated; the former were evidently enveloped in a greyish fibrous shell, from which it was possible to enucleate them; the latter are fixed in the midst of a hard, fibrous, resistant and rather whitish tissue. Irregularly rounded, of the size of a cherry-stone or a nut, they are firm, project slightly above the tissue which surrounds them, are depressible under the finger, elastic, and very little friable. Their colour is yellowish white, studded with yellow patches. There was no similar tumour in the left lobe. A fibrous tissue studded with nuclei and numerous granulations, such is the composition of the tumours of the right lobe.

The spleen was very large, being nearly ten inches in length; its capsule was thickened and on section it presented a fleshy appearance.

The kidneys appeared enlarged, their surface was regular, and of a yellowish blue colour; the layer of cortical substance was very thick and of a yellowish and brownish colour. There was a granular condition and

destruction of a great number of the epithelial cells of the tubuli, with slight amyloid degeneration.

The mesenteric glands were large, indurated, and of a bluish tint (amyloid degeneration).

Fibrous adhesions, difficult to break, united the tunica albuginea to the tunica vaginalis. The testicles were about the normal size, but the left was somewhat smaller than the right. On section these organs were resistant, and creaked slightly under the scalpel. They represented very fairly two fibrous tumours, as well by their consistence as by their structure, which consisted almost entirely of fibrous tissue and to such an extent that scarcely any spermatic ducts could be discovered. In the midst of the fibrous mass of the right testicle were two small, very firm nodules, slightly yellowish and of a gummy appearance.

Side by side with the preceding cases, examples of gummy tumours in the stage of crudity or of softening, let us now give some cases showing these same changes in the process of absorption or already absorbed.

Cachexia.—Cicatrices and gummy tumours of the liver.—Lesions of the spleen and kidneys.

Obs. XXXII.—M., aged 30, boot-stitcher, entered the Hospital de la Pitié, October 29th, 1860.

She had some white cicatrices in the neighbourhood of the clavicles, and admitted having formerly had venereal disease; she gave very vague details, however, of any symptoms she may have had; she was thin and cachectic. Her health had been bad for a year, during which time she observed herself to be falling away. She entered the hospital after a fall which appears to have been preceded by vertigo. Her lower extremities were oedematous; there was no appreciable lesion of the senses, but, considering the deteriorated condition of the organism and the existence of vomiting, suspicion of a cancer of the stomach was excited. She died some days later.

Post-mortem examination.—The brain was not examined. The lungs were merely oedematous. The heart was small but healthy, several of the thoracic glands were enlarged but not tubercular.

The right lobe of the liver was small, deformed especially towards its middle part, and towards its lower edge in the neighbourhood of the gall-bladder. In fact, very deep cicatricial depressions existed there, and the hepatic substance was found to be replaced by fibrous tissue; near the floor of the depressions in the right lobe were seen several tumours of a white or yellowish colour, of the size of a cherry-stone or a nut, pretty easily enucleable and enveloped in a greyish and vascular fibrous tissue. Each of these tumours was composed of a fibroid web, of numerous proteids and fatty granulations, and of deformed granular nuclei. There were met with, moreover, on the surface of the liver, some furrows, without any

subjacent tumour; there were yellow spots and a lardaceous appearance of some portions of the parenchyma. The hepatic cells in the neighbourhood of the tumours had disappeared, or were small and granular; most of the others were in an advanced stage of fatty degeneration.

The spleen was twice the normal size, its fibrous capsule much thickened.—The kidneys were small, and there was observed in them an abundant and granular fibroid web which became pale under the influence of acetic acid, and appeared to be composed of fusiform bodies fitting to each other. The epithelium of the tubes was degenerated at several points. One of the supra-renal capsules was enlarged and indurated. Several of the prevertebral glands were diseased.

The alimentary canal was healthy, the genital organs were little changed.

Observation LXIX. of Frerich's work mentions the existence of a lesion of the liver very analogous to the preceding. One of the cases given by Virchow also contains the notice of a similar change. In the following case we also find a change identical, so to speak, and which we do not hesitate to attribute to syphilis, in spite of the positive absence of venereal antecedents; but it must be added that the patient was not questioned on that point and that he died the day after his admission into the hospital.

Gummy deposit with considerable deformity of right lobe of the liver, waxy degeneration of left lobe.—Cicatrices in lungs.—Gummy tumours of diaphragm.

Obs. XXXIII.—C., aged 56, a weaver, entered the Hôtel-Dieu, July 15th, 1862. He is a tall, well-formed man, of pretty robust appearance, who, almost a year ago, observed himself to be falling away. He is now thin, cachectic, and in a state of great weakness. His face wants expression, his skin is earthy, yellowish, his legs are œdematous, his general appearance gives the idea of long-standing and serious disease. On examining him, however, there was not found the tubercular or cancerous disease in his organs which one was at first led to expect. On auscultation, there was heard, it is true, a very limited blowing sound at the apex of the right lung, and at the same point there was slight dulness on percussion; but these symptoms were not sufficient to account for the gradual wasting away of the patient. The heart appeared normal. The abdominal cavity did not contain any serous effusion, but the liver had not the usual form. On palpation, it was found that this organ descended very low and reached the umbilical line on the right side, but was wanting to the left of the linea alba. It appeared as if the organ had lost in breadth what it had gained in length; in fact, it was not felt beyond the right edge of the right rectus abdominis, appearing as if cut off vertically at that point. There was nothing peculiar about the spleen or kidneys.

The diagnosis was not without difficulties, it might have been believed on a first examination to be a case of simple tuberculisation. This diagnosis did not, however, appear sufficient, and I confess that the little agreement between the pulmonary lesion and the cachexia, and the presence of so manifest a deformity of the liver, pleaded in favour of a syphilitic affection; unfortunately, the patient could not give any precise information the day after his admission he complained of a constriction at the epigastrium and succumbed a few moments after.

Post-mortem examination.—No cutaneous lesion existed, the œdema of the lower extremities resisted pressure by the finger.

The bones of the cranium were of normal thickness, and adhered pretty firmly to the pericranium. The dura mater and brain did not present any appreciable change to the unassisted eye. At the apex of the right lung and towards the middle and lower part of the same organ, were seen small depressions, some starlike, others radiating. These might perhaps be regarded as cicatrices due, not to a solution of continuity, but to the absorption of a product situated superficially at the point of the cicatricial depressions.

The parenchyma of the lung was firmer than usual and presented, in the midst of an indurated, greyish tissue, a white substance analogous to cheese or mastic, and a small cavity. Nowhere in the neighbourhood did there exist the least trace of tubercular granulations.—The cicatrix of the middle lobe had the form of a star with three arms and presented, on section, a whitish line, surrounded by a blackish substance, which was prolonged far into the parenchyma of the organ. The depression on the lower lobe presented the closest analogy to the preceding, but there existed, moreover, a firm adhesion of the base of the right lobe to the corresponding surface of the diaphragm. This muscle was the seat of a thickening by no means dependent upon a pseudo-membranous product, but upon the presence in its thickness of small, whitish, softened tumours of the size of a pea; further there was a structure almost entirely fibrous at points where normally exists a muscular tissue, adhering closely to the convex surface of the liver, and from this disposition resulted, doubtless, the epigastric pain and dyspnoea complained of during the life of the patient.

On being taken out of the abdominal cavity, the liver presented a form which rendered it almost unrecognisable; the right lobe scarcely existed at all, and what did remain of it was almost entirely composed of deep and fibrous cicatrices, the glandular parenchyma had disappeared to such an extent that the gall-bladder occupied the right edge of the organ. Above the gall-bladder, and in the neighbourhood of the groove for the inferior cava, towards the middle portion of the liver was found a tumour closely adherent to the diaphragm and composed of a yellowish white substance, somewhat soft and analogous to rancid bacon or suet. The lobulus Spigelii, increased in size, contained a rounded and smaller tumour, softened at its centre and surrounded by greyish fibrous tissue. Larger than natural, the inferior portal eminence presented on its surface an analogous tumour studded here and there with small cavities. In the

venous furrow also was found, in the midst of an abundant fibrous tissue, a nodosity having the same aspect. The left lobe was considerably augmented in volume, and presented a very elongated point which descended to the right as far as the level of the umbilicus. Some furrows were observed on its under surface; there was nothing peculiar about its consistence, its brownish surface was studded with yellow spots (amyloid degeneration).

The spleen was hypertrophied and rather hard. The mesenteric glands and those of the inferior surface of the liver were enlarged, a little soft, and yellowish (medullary change of Virchow); the testicles were small and atrophied, the alimentary canal was not changed, and the brain and spinal marrow were healthy.

The right kidney was about one-third smaller than natural, the atrophied cortical substance was confounded with the tubular substance; the left kidney, pretty normal in size, presented on its surface, as did also its fellow, small nodules of the size of a pea and some cicatricial depressions. In a certain number of the tubuli, the epithelium was granular. The fibrous stroma was more abundant than usual and several of the Malpighian bodies were atrophied.

The uncertainty which exists in some of these latter cases, in reference to the antecedents of the patients, might perhaps leave some doubt as to the nature of the lesions met with after death; but if we remark that there is no cause to explain the cachetic condition observed in the different subjects, and especially if we take into consideration the altogether peculiar anatomical characters, not only of the liver but also of the other organs, we soon become convinced that the information given was either incomplete or untrue, and that a specific origin was perfectly admissible.

Let us hasten to add that Dittrich, observing the same changes, did not fail to attribute to them a syphilitic origin. One of the instances he gives proves still better than ours the enormous deformation which the liver undergoes under such circumstances. In a man of 50, who had cicatrices in the pharynx, &c., he found the right lobe of the liver replaced by a cicatricial tissue adherent to the diaphragm by means of false membranes and containing only large vascular canals: the liver being thus destroyed as far as the groove of the gall-bladder, the hypertrophied left lobe had assumed the volume of an ordinary liver, presented on its surface deep cicatricial furrows, and filled the right hypochondrium. These different cases represent the gummy tumours of the liver in their period of perfection, of fatty degeneration and of absorption. Any one wishing to complete the picture may refer to a case which we give further

on, in Article VIII., in which there is question of a calcified gummy tumour.

Syphilitic depressions and cicatrices of the liver.—Dittrich was one of the first to attribute to their true cause these vestiges of changes. Since then, syphilitic cicatrices of the liver, observed by several authors, have been the subject of a communication by ourselves to the Anatomical Society, the chief object of which was to show the advantage it is possible to draw from them for the anatomical diagnosis of syphilis of the viscera. Their frequency is such, in fact, that—

Virchow found them five times in five cases of hepatic syphilis,
Frerichs found them four times in four cases of hepatic syphilis,
Meyer found them five times in eight cases of cerebral syphilis,

and that in twenty-two post-mortem examinations of visceral syphilis, we have observed them fourteen times.

Cicatricial changes in the liver may be divided into two groups; cicatrices resulting from the absorption of gummy products and cicatrices having for their cause a partial hepatitis.

In general when they follow gummy deposits, they show themselves in the form of deep, irregular depressions, at the bottom of which exists an abundant fibrous tissue and detritus of gummy products out of which escape resistant membranous septa which adhere to the neighbouring parts. They are most frequently situated about the middle portion of the right lobe, which is sometimes found to be divided, as it were, into two parts. They are sometimes met with in the substance of the left lobe, which may then be reduced to a thin, fibrous tongue. The liver, under such circumstances, is strikingly deformed, and it is easy to understand the value of this condition in a diagnostic point of view.

When they are rather the result of a chronic hepatitis, syphilitic cicatrices of the liver occupy one or other of the two surfaces of the gland, but especially the convex surface in the neighbourhood of the suspensory ligament; they are found much more rarely in the thickness of the parenchyma. At one time, it is linear or star-shaped fibrous bands, in the neighbourhood of which the surface of section presents a slight depression; at another, funnel-shaped depressions, more or less deep, and which it is often difficult to distinguish from cicatrices resulting from the absorption of gummy tumours; or again, it is furrows oblique rather than parallel to the

greater axis of the organ, curvilinear rather than rectilinear, and of which the edges are frequently united by fibrous bands.

A section made in their vicinity showed that the capsule was whitish and thickened, and that the bottom of the furrows was formed of a retracted fibrous web, of almost empty canals, of detritus of cells, and of fatty granulations or globules. Under these circumstances, the liver is generally diminished in volume, except in the case of amyloid or fatty degeneration. In seven cases in which we have observed the presence of cicatrices of the liver not preceded by gummy products, in three the diseased organ was enlarged in consequence of one or other of these forms of degeneration. In the other cases, the volume of the liver was either little changed or diminished.

Syphilitic cicatrices of the liver will not be confounded with the transverse depression which, in women, results from wearing very tight stays; in these cases, in fact, the capsule never presents fibrous bands but is merely a little thickened. The depressions which follow the obliteration of a vascular trunk, the cicatrices consequent upon a wound, and those which result from the absorption of a deposit of pus, have a closer analogy to syphilitic cicatrices. But the atrophy produced by lesion of a vessel occurs in the direction of that vessel and the capsule is not thickened in its neighbourhood. Traumatic cicatrices are at least very rare, if they exist at all, and must be so on account of the danger of such injuries to the liver. Reliable authors admit the possibility of cicatrization of abscesses of the liver. In a case related by Cambay,* two months after the cessation of symptoms of a confirmed hepatitis, the patient having succumbed to tubercular disease of the lungs, there was found on the convex surface of the liver a depression of the size of a half-franc piece; at that point, the tissue was white and fibrous; more deeply seated was a collection of pus, surrounded by granular substance, without the presence of which it would, perhaps, have been difficult to distinguish this change from a syphilitic cicatrix. Haspel has also seen, on several occasions, white, star-shaped, fibrous cords, which appeared to him to represent the remains of an abscess of which it had been possible, during life, to follow first the progressive, then the retrograde course. But, on the supposition of an exact interpretation on the part of that author, it may be remarked that these

* *Maladies des climats chauds*, p. 423.

lesions are, in general, little numerous, and that, unlike syphilitic cicatrices, they are situated rather in the depth than on the surface of the organ.

Previous syphilitic symptoms : caries of one of the bones of the pubis ; cicatricial, funnel-shaped, depression on the convex surface of the liver.

Obs. XXXIV.—H., a female, æt. 39, had previously had symptoms of syphilis when she entered the Hôtel-Dieu under the care of Professor Langier.

Although of a strong constitution, this patient was, at the time of her admission, in a state of progressive wasting. She complained of pain in the region of the liver and in the abdomen generally ; the pain in the liver was increased by pressure. But the liver was neither increased in size nor altered in form, and scarcely projected beyond the border of the ribs. The pain in the abdomen was most intense towards the iliac fossa of the left side. The digestive functions were but little deranged, the appetite was almost null. Respiration and circulation normal. There existed slight uterine leucorrhœa without metrorrhagia. The neck of the uterus was hard, knotty, irregular, and normally open.

Soon after her admission, this patient, having been seized with vomiting of greenish matter, quickened pulse, fever, and more violent pain in the abdomen, was transferred to a medical ward, where she died some days after.

Post-mortem examination.—There were some peritoneal adhesions in the left iliac fossa, caries of the os pubis, and slight suppuration in the sheath of the psoas iliacus muscle. The neck of the uterus was softened, yellowish in a part of its extent, and on pressure there escaped from it a whitish fluid to a certain extent analogous to that of cancer, although the lesion from which it proceeded had by no means the appearance of a cancer ; this led to the idea of the existence of a gummy exudation.

The liver, almost normal in size, presented a yellowish colour and was fatty ; on its right lobe was seen, near the lower edge, a circular opening, about $\frac{1}{2}$ of an inch in diameter, with wrinkled and retracted edges. This opening communicated with a large cavity, about $\frac{1}{2}$ of an inch in depth and hollowed out of the parenchyma of the liver. The walls of this cavity were formed of a fibrous or fibroid tissue, hard, resistant and, as it were, lardaceous, and which, on section, presented yellow points formed in a great measure of fatty granulations ; a soft and greyish matter was found attached to the walls of this cavity, in which were found in great abundance fatty and proteic granulations.—The other organs were healthy ; the heart was covered with a thick layer of fat.

The various changes which we have just been studying affect only the web of conjunctive substance ; it is in the midst of this web, in fact, that syphilis manifests its morbid action. The other tissues

which enter into the composition of the liver are, however, far from being always exempt from change. In addition to the vascular compression which results from the retraction of certain syphilitic products, the branches of the portal vein are sometimes obstructed by pseudo-membranous products or by fibrinous concretions. Frerichs has already pointed out this peculiarity, which we meet with also in one of our cases (Obs. XXVIII.).

Apart from the change which the hepatic cells undergo from the presence of syphilitic products, these elements are frequently also the seat of modifications which several observers have felt called upon to connect with syphilis and which, on that account, merit some attention on our part.

Amayloid and fatty degeneration.—In eighteen cases of constitutional syphilis, Frerichs always found an adipose condition of the liver in a more or less marked degree, and twice he succeeded in demonstrating the presence of lardaceous matter. In our own cases, these same lesions were noted with an almost equal frequency, in other words, they are not rare. Accumulation of fatty substances in the form of granulations and of globules within the hepatic cells, such is the nature of the fatty change in the liver. The surface of that organ is slightly granular, its colour yellowish; its volume is increased, while its specific weight is diminished. The lardaceous liver is also larger than in the normal condition; from the very commencement of the change there are observed in the midst of the *acini* spots the transparent colour of which contrasts strongly with the dull grey tint of the edges; the acinated structure also appears much more evident. Moistened with a solution of iodine, the brilliant and transparent points assume an intense red colour which passes into violet on the addition of sulphuric acid, while the rim around them merely puts on a pale yellow tint. Later on, the glandular parenchyma presents a smooth, flat surface, of a somewhat brilliant, yellowish red colour; on being sliced, it presents an appearance considerably resembling that of smoked salmon.

Portal first, then Rayer, and still more recently Rokitansky, Ditrach, H. Meckel, S. Wilks, Virchow, Frerichs and several other authors have given instances of the coexistence, with syphilis, of the form of degeneration still called lardaceo-ceruminous, cholesteric, waxy, amylaceous degeneration; but while some see in this only a simple coincidence, or the direct action of mercury upon the liver,

others, amongst whom are Graves and Budd, attribute the ceruminous liver to the combined action of syphilis and mercury. Some, lastly, after the example of Frerichs, regard this change as a peculiar form of hepatic syphilis. It appears to us that new researches are required to settle this question; in any case mercury and syphilis appear to play a secondary part only in this pathogenesis. For, on the one hand, amyloid degeneration is met with in the liver of patients affected with syphilis who have never been treated with mercury, and is not usually met with in cases of chronic mercurial poisoning. On the other hand, as, far from being peculiar to syphilis, it forms part of the accompaniments of a great number of chronic diseases with marasmus and cachexia, there is every reason to believe that it finds its cause, not in any particular disease, but in the derangements of nutrition which accompany a whole group of diseases, and that, consequently, it cannot be regarded as a manifestation of constitutional syphilis in the same degree as the gummy changes.

One more modification of the liver has been observed in constitutional syphilis. Known under the name of acute yellow atrophy, or of acute bilious softening, characterised anatomically by the destruction of the hepatic cells and symptomatically by a number of phenomena included under the name of acute jaundice, this affection, as we have already said before, appears to be without any direct ætiological connection with syphilis.

Numerous changes which we are not now called upon to describe frequently coexist with the syphilitic lesions of the liver. We shall merely point out hypertrophy of the spleen, and of the prevertebral and iliac glands, certain modifications of the parenchyma of the kidneys, and the presence, in the cavity of the peritoneum, of clear, transparent, and albuminous serum.

SYMPTOMATIC STUDY.

The symptoms of hepatic syphilis do not necessarily admit of the same divisions which we have adopted in the study of the anatomical lesions, and consequently we shall content ourselves, in the course of a collective description, with pointing out the more special symptomatic peculiarities of each of the anatomical forms described above. Of these symptoms some are physical, others functional.

Physical symptoms.—Furnished by palpation and percussion, the physical symptoms constitute the principal signs of hepatic syphilis. The volume of the liver in the cases hitherto observed has been very variable, rarely normal, but most frequently augmented or diminished. In certain cases, in which it has been possible to follow the various changes undergone by that organ during the course of the disease, it has been ascertained that a period of increase had been followed by a period of atrophy, a phenomenon easy to understand after the anatomical study we have made and appertaining more particularly to interstitial hepatitis. It would, nevertheless, be incorrect to suppose that things always run this course; such is by no means the case and sometimes, far from decreasing in size at a certain period, the liver continues to increase from the constant deposit of a greater quantity of fatty matters and amyloid substance. With the increase in size is associated in a certain number of cases the sensation of projections or nodosities on the surface of the liver. This sensation, which is very analogous to that produced by the presence of cancerous masses, is distinguishable by the finger from the circumstance that the hardness is greater and the tumour more circumscribed. In spite of the hypertrophy and of the irregularities of the surface, the liver may retain its form. But often, at a somewhat advanced period of the morbid evolution, the organ is notably deformed. Sometimes the hypertrophied larger lobe descends as far as the umbilicus, and furnishes to percussion a dulness in the whole hypochondrium to the right of the linea alba, while on the left the smaller lobe is found reduced to a thin tongue; sometimes the partly destroyed right lobe does not descend so low as the left; sometimes, lastly, there are felt in the free edge fissures or deep depressions which render this edge uneven, knobbed, and altogether irregular. All these shades, which careful percussion and still more palpation generally enable us to ascertain exactly, are, so to speak, peculiar to syphilis. There are few diseases, in fact, in which so great a deformity of the liver is met with, for even in non-syphilitic cirrhosis and cancer, the atrophied or hypertrophied liver always retains an almost normal proportion between its lobes. Moreover, the deformity in question has always been valuable for diagnosis and is truly characteristic. Besides these changes, it is sometimes possible to recognise that the gliding movement of the abdominal wall upon the liver does not take place in respiration, the hand feels the organ immediately under this immovable wall, and may even detect the adhesions which unite it to the liver.

Functional symptoms.—These symptoms are almost entirely wanting in some cases, so that if physical examination be not made, we are sometimes astonished after death to find anatomical lesions which we were far from suspecting during life. Such is not, however, generally the case, and the syphilitic lesions of the liver occasion derangements which, whether taken separately or considered as a whole, do not differ notably from those which belong to all the hepatic affections. One of the principal of these symptoms is pain: sometimes a mere sensation of discomfort, uneasiness or weight, it is sometimes acute, continuous, exacerbating; most commonly spontaneous, it is in general aggravated by palpation and percussion. One patient observed by Frerichs suffered incessantly for three months; another had intermissions which lasted about a week, after which supervened exacerbations accompanied by slight fever. More easily caused in the neighbourhood of the tumours, when any exist, pain is not a constant symptom; moreover, its intensity is not the same during the whole course of the disease. It may be said to be wanting during the last period. It has never, so far as we know, been observed to radiate towards the shoulder or any other part of the body.

Ascites is another not less important symptom; it is observed with both our anatomical forms, appearing always to be more intimately connected with interstitial hepatitis.

I should not be inclined, like Schrant,* to assert that patients affected with hepatic syphilis generally die of dropsy; but I fully admit the frequency of ascites. It is very rare, said Cirillo, to see a patient die dropsical in our hospital in whom there are not found in the neighbourhood of the genital organs cicatrices resulting either from buboes or from some ulcers. Noticed by Schutzenberger,† Virchow, Leudet and many other observers, ascites has been seen five times by us and, a fact worthy of remark, this symptom was three times followed by a radical cure. Ascites has, in most cases, shown a slow and progressive development, but this circumstance, to which Gubler and Leudet have already called attention, did not aid greatly in the diagnosis of the disease. This dropsy has sometimes been observed to increase considerably in a few days,

* *Tidjsch. Nederl. Maasch.*, 1851; and *Canstatt's Jahrbuch. für Medic.*, 1851, t. ii. p. 34.

† *Gaz. hebdomadaire*, 1857, p. 274.

which is easily explained by the hypothesis of compression of the portal vein by a gummy tumour. With ascites frequently coexist pseudo-membranous deposits on the surface of the peritoneum, and especially upon that portion which covers the liver or occupies the region of the right hypochondrium. This is a circumstance upon which I cannot insist too much, for in overlooking it we should run the risk of making an error, and especially of believing in the existence of tubercular peritonitis.

Icterus is more rarely observed in the course of the hepatic lesions which we are now examining, mention being made in a few cases only of this symptom. In two cases mentioned by Frerichs, it was the result of compression of the bile ducts, once by the tumefaction of the lymphatic glands, another time by an extensive cicatrix. In a third case, it was to a perihepatitis that the same author attributed this phenomenon, which Biermer and ourselves have observed under the same conditions. This symptom is remarkable for a slow, progressive course, a long duration and sometimes also great intensity. Although dependent upon a material lesion, it sometimes shows itself, according to Gubler, Leudet, Virchow and Lebert, several years after the appearance of serious lesions of the hepatic organ. The following case is a proof of this:—

Two chancres at 24 years of age, absence of cutaneous manifestations; osteo-copic pains, exostosis and icterus; probable syphilitic perihepatitis; syphilitic orchitis.

Obs. XXXV.—B., æt. 44, entered the Hospital de la Pitié, February 16th, 1861, under the care of M. Gueneau de Mussy. At 14, he had small-pox; at 24, he contracted a gonorrhœa and two chancres which lasted about fifteen days. He never observed the least cutaneous eruption; at 24, he had also disease of the eyes, which lasted more than eight days, and recently a fresh gonorrhœa, which disappeared in less than ten days.

He was a man of middle height and strength, with white hair and a beard which is turning grey; he stated that he had been ill since January 4th; after taking cold, he had felt fatigue and lassitude, had lost his appetite and soon became unable to work. This state of uneasiness, accompanied by nausea without vomiting, lasted for fifteen days. B. afterwards resumed work; but a fortnight later he was attacked by icterus and soon afterwards perceived swelling of one of his testicles; intense pain in the head afterwards supervened which induced him to come into the hospital. His skin was of a slightly greenish jaundiced colour. His appetite was almost null, and there was general weakness and discomfort;

the liver projected beyond the ribs and seemed to adhere closely to the diaphragm; the spleen was of normal size; there was no diarrhoea nor any albumen in the urine; respiration doubtful at right apex, but without bloody expectoration; heart healthy; exostosis on top of head; violent cephalalgia with nocturnal exacerbations; glands in the groins hard, isolated, small and resistant; one of the testicles was enlarged, piriform, very firm, resistant, elastic under the fingers on pressure; no fluid in tunica vaginalis, slight irregularity of surface of organ; epididymis healthy. This condition lasted until, a specific treatment having been adopted, each of these symptoms became ameliorated and the patient was able to leave the hospital. Not having been able to see him at the time of his going out, it is impossible for me to give a detailed description of the state of the organs at that period, but the essential point here was the rapid modification which supervened under the influence of a specific treatment.

It may be asked what was, in this case, the cause of the icterus, but in truth, that is a question of little importance and one to which it is not possible to give a positive answer, there is reason to believe, however, in the existence of one or other of the changes pointed out by Frerichs.* However this may be, these cases and some other similar ones, in which the icterus may be said to be accidental, admit of establishing the rarity and slight importance of this phenomenon in the symptomatic study of hepatic syphilis.

Various hæmorrhages may coexist with the ascites or icterus and be, like them, only an effect of the hepatic change. We know that Hippocrates spoke very clearly of the nasal hæmorrhage which occurs in cases of obstruction of the liver and spleen. But this hæmorrhage is also observed in the course of the syphilitic affections of the liver. Cirillo declared that patients who have obstructions of the liver are frequently seized with hæmorrhoidal flux, hæmorrhage from the right nostril, and sometimes even by a spitting of blood, and, moreover, several of the cases given further on make mention of this symptom.

Derangements of the digestive functions are frequently associated with syphilitic affections of the liver, and in certain cases, the latter have no other symptom, ascites and icterus being altogether wanting. In general, little marked at the commencement of the hepatic lesion, these derangements supervene gradually in proportion to its

* Frerichs, *Traité pratique des maladies du foie et des voies biliaires*, 2^e édition. Paris, 1866.

development, the appetite diminishes and becomes lost, digestion is bad, the patients have eructations and mucous vomiting but, above all, irregular diarrhœal evacuations. Of seven cases contained in Leudet's report, diarrhœa is mentioned five times: most commonly serous and whitish, the matter voided is sometimes brownish or blackish, not unlike coffee-grounds, or even dysenteric, as has already been pointed out by Leonard Botal.* Rather common in the course of hepatic affections, this symptom, which may depend upon a modification of the blood, does not necessarily prove the existence of a material lesion of the intestine; rarely, in fact, is this viscus ulcerated under such circumstances.

At the same time with these derangements is usually observed a meteorismus more or less marked, due partly, no doubt, to the derangement of the biliary function. Dilatation of the sub-cutaneous veins of the abdomen manifests itself only in some cases, in which there is some obstruction of the circulation in the portal vein. Progressive emaciation and a certain degree of muscular atrophy, sometimes even a slight fall of temperature, are symptoms which cannot be too much insisted upon, and which often terminate in marasmus and death. More frequent with interstitial hepatitis, they find their cause in the change in the biliary secretion, and still more in the derangement of the glycogenic function of the liver.

The nervous and circulatory functions are usually, we think, carried on normally unless there be some morbid manifestation in the organs themselves which preside over those functions. The same is not always the case with the respiratory functions, the performance of which is sometimes impeded by adhesions of the diaphragm to the liver, or even to the base of the lungs. Percussion shows the degree of concomitant hypertrophy of the spleen, and palpation enables us to ascertain the increase in size of the visceral glands. The urine is often albuminous, and this symptom being added to the deformity of the liver and to the derangement of the hepatic functions is not, as we know, without a certain diagnostic importance. The urates are rarely in excess.

Edema of the lower extremities is observed here as in most forms of cachexia, and clots are sometimes found in the veins. The skin, under such circumstances, does not escape deep-seated modifications. Without speaking of the gummy tumours, ulcerations, or cicatrices

* *Luis venereæ curandæ ratio, Aphrodisiacus*, p. 891.

which may be met with in it, let us state that it is generally dry, wrinkled, and remarkable for a somewhat yellowish, leaden tint, or for a bronzed and uniform colour.

The syphilitic manifestations which most frequently coexist with hepatic lesions are ulcers or cicatrices of the throat, gummy tumours of the sub-cutaneous cellular tissue, cicatrices of the skin, and exostoses of the bones of the cranium and of the anterior portion of the tibiæ.

Course and termination.—The course of hepatic syphilis is slow, progressive, insidious, or even concealed. In some cases, it is seen to run through all its phases without producing any very appreciable phenomena; want of reaction, and a small number of functional derangements are, in fact, the characters peculiar to syphilitic affections of the liver.

In general, those affections are of long duration, except when an extension of the ascites or some complication causes death. In certain cases, they may exist for months or even years without occasioning any considerable disturbance within the organism. They terminate most frequently by producing marasmus and cachexia.

Their termination is variable; their cure, which is not very rare, is sometimes spontaneous, *i.e.*, there may be a cessation of the functional derangements without the intervention of any treatment, more frequently, perhaps, than would at first sight be supposed. A case given further on (see Obs. XXXIX.) will, I think, place beyond doubt this fact which, to us, appears indisputable.

Under other circumstances, it is after the employment of a treatment with preparations of mercury or iodine that an amelioration or even a definite cure is seen to be attained. The following cases are authentic instances of this.*

Gonorrhœa and chancre at 22 years of age; at 42, osteocopic pains and exostoses; at 45, hepatic affection, ascites.—Paracentesis, iodide of potassium, cure.

OBS. XXXVI.—C., æt. 45, printer, entered the Hospital de la Pitié, August 24th, 1860. He was a man of middle stature, in whose family there was no hereditary disease. He related that he had always been

* Leudet, Schutzenberger, Handfield Jones, Biermer, Keesbacher, Hérard and some other authors have given cases of this kind. In that of Schutzenberger the post-mortem examination confirmed the correctness of the diagnosis formed during the life of the patient.

healthy during his youth. At 20, he had a pimple which suppurated; at 22, a gonorrhœa and a chancre, which lasted for about three weeks. Since that time he was well and does not remember to have had the least symptom of syphilis. At 42, he felt pains in the shoulder and right side of the chest, then in the left side and in the back; these pains were accompanied by shootings and were more intense at night. Two months later, he felt beating in the head and pains with nocturnal exacerbations; these pains disappeared and reappeared several times after one, two, or three months. Lastly, the patient became aware of the existence of several tumours on the head; he took advice and was ordered iodide of potassium, but this treatment was never continued for more than twelve days. Three weeks before admission into hospital, after three days of excess, he was seized with serous and whitish diarrhœa; some days after, the diarrhœa disappeared, but the abdomen became enlarged; the patient was weak, felt shooting pains in the sides, and shortness of breath in walking; he lost his appetite and had a bitter taste in his mouth; he had neither nausea nor vomiting; there was no fever. He was ordered a purge, a bath, and camomile. The osteocopic pains returned, the abdomen became more and more enlarged, and the patient came into the hospital. We found his state to be as follows:—

Skin yellowish or bronzed; cicatrices of small-pox on face; hair black; advanced emaciation, atrophy of the limbs, general loss of strength; abdomen much enlarged. Below the umbilicus, resonance due to meteorismus of intestines; lower down, dulness beneath a curved line having its concavity upwards; fluctuation, evident ascites; impossibility of finding the borders of the liver. Spleen pretty normal; no albumen in urine; respiration jerking and rough at right apex; lesion probably of little extent. Heart healthy. No fever; pulse regular and pretty normal; occasional slight epistaxis; no derangement of cerebral functions; œdema of lower extremities.

I diagnosed cirrhosis. Several purges were given for the purpose of combating the ascites, but without the least success. The ascites increased to such an extent that on the evening of August 10th, I found the patient in a complete state of asphyxia, with not more, apparently, than ten minutes to live; his face was mottled, his respiration deep and slow, his extremities cold and insensible. I hastened to perform paracentesis and took from the abdomen nearly twelve quarts of a yellowish serous fluid containing a large quantity of albumen. Examination of the liver after tapping enabled me to ascertain that that organ projected one or two fingers' breadth beyond the edge of the ribs, and it appeared evident to me that there existed some nodosities a little above its free edge. Convinced that the ascites would soon recur, and that in a few days I should have to repeat the tapping, I again examined the patient very carefully, and then only observed that he presented the cicatrix of a bubo in the groin and several exostoses about the cranium. The knowledge of these new symptoms made the case more hopeful; I remembered the patient mentioned above, who recovered spontaneously, and the day after the paracentesis I administered fifteen grains of iodide of potassium. This

medicine was borne perfectly well, and the quantity was soon increased to forty-five grains. The effusion reappeared with a little meteorismus, but soon remained stationary.

Ten days after the operation, while the patient was taking forty-five grains of iodide of potassium, there was an evident diminution both of the ascites and the meteorismus.

This treatment was continued until October 1st. At that time, scarcely any serum remained in the abdomen, the size of which was almost normal; the patient had recovered his appetite and part of his strength and flesh; he began to get up and to walk. The iodide of potassium, suspended October 1st, was resumed on the 4th to the extent of twenty-two grains and a half daily. October 12th, the abdomen was normal; the patient felt well, with the exception of some shortness of breath on going upstairs. The specific treatment was continued until November 1st. The patient went out on the 13th. The liver scarcely projected at all beyond the ribs, and did not present the same irregularities as at first. A soft circumscribed blowing sound was heard at the apex of the left lung where there was probably a small cavity, as the patient had spit a little blood.

Indurated chancre.—Syphilides.—Affection of liver, spleen, and peritoneum.—Advanced wasting.—Treatment with preparations of mercury and iodine.—Cure.

Obs. XXXVII.—B., commercial traveller, æt. 34, was born of healthy parents, but three years ago his father had hemiplegia, which still continues; his brothers and sisters are healthy; as for himself, he had good health up to the age of 23. At that period, he contracted a chancre, which perforated the frænum and persisted for a comparatively long time. Later on, he had cauliflower excrescences on the penis and a cutaneous eruption. A medical man at Angoulême whom he consulted declared the latter to be syphilitic roseola. This patient was affected at the same time with alopecia and falling off of some of his eyelashes, symptoms which lasted nearly two months and for which he was ordered calomel ointment, sarsaparilla, and bichloride of mercury. At 24, he contracted a gonorrhœa; at 26, he had a fresh syphilitic eruption, angina, cephalalgia, and general indisposition. For these he took sarsaparilla and proto-iodide of mercury for two months. At 29, he had indigestion, pains in the epigastrium and sometimes in the whole abdomen, occasional meteorismus, cough with expectoration, and vomiting from time to time. It is to be mentioned that at this time B. was living badly. The physicians consulted ordered cod-liver oil, &c., and if the patient's account is to be relied on, it was from that moment that the liver began to increase in size.

In spite of the treatment adopted, B. continued to lose flesh, his stomach was intolerant of food, and, from time to time, he had vomiting; his life became a burden to him. Under these circumstances, he observed a swelling in the calf of the right leg, and asserts that he had

a tumour there which afterwards disappeared; but from that time his health has always been bad, and he has wasted away day by day. After having been treated for a long time as affected with phthisis, this patient presented himself to me, July 4th, 1863, in the following condition:—

His appearance was that of a well-built man with black hair, but he was as thin as a skeleton. Not only had the sub-cutaneous adipose cellular tissue disappeared, but the muscles themselves were evidently atrophied. The skin was dry, wrinkled, withered, and of a slightly bronzed tint; there was sometimes slight oedema of the limbs. The voice was somewhat changed; there was cough, slight dyspnoea and expectoration. The chest was flattened, but neither auscultation nor percussion gave evidence of a material lesion in any part of the lungs. The movements of the heart were regular; the pulse was weak. I was struck with the enormous increase in size of the abdomen, and the patient stated that he was subject to attacks of diarrhoea; there was meteorismus and the intestines felt uneven and knotty, appearing, on palpation, as if joined together by means of false membranes. I could not detect any effusion. In one of the iliac fossæ there was slight dulness, which appeared to me to be due to pseudo-membranous products.

What especially attracted my attention was the state of the liver and spleen. The right lobe of the liver descended as far as the umbilicus; it appeared slightly uneven on its surface and as if firmly adherent to the abdominal wall; the left lobe was comparatively small. The spleen projected three fingers' breadth beyond the edge of the ribs and appeared to measure from six to seven inches; the abdomen was generally distended with flatus, the appetite almost null, digestion slow; no albumen in the urine; scarcely any venereal desire. From time to time the patient was seized with slight headache at night, insomnia and dreams; during the day, there was a tendency to sleep. For some time the patient had lost his memory, had become incapable of doing anything, and could scarcely write a letter.

Convinced that the case was not one of a tubercular affection of the lungs, cognisant of the antecedents of the patient, and knowing, moreover, that he had never undergone miasmatic poisoning, I did not hesitate, despite the absence of external specific lesions, to attribute to a syphilitic origin these manifest changes in the liver and spleen and, perhaps, in the peritoneum. I treated the patient accordingly. I ordered him one of Sédillot's pills night and morning, and inunction with iodine ointment over the abdomen. As I had foreseen, the diarrhoea soon reappeared, and I saw myself obliged to stop the mercurial treatment, for which I substituted syrup of the iodide of iron. At the same time I continued the inunction over the whole abdomen, and urged the patient to take a nutritious diet. Under the influence of these measures there appeared to be a slight improvement, the appetite returned, the strength appeared greater. October 8th I again ordered him Sédillot's pills, syrup of the iodide of iron and two sulphur baths every week.

This treatment was continued without much change until the month of

January. At that time the patient felt much better, and I was enabled to ascertain a manifest diminution in the volume of the liver and spleen ; the digestive functions were almost normal, and from day to day the patient perceived that he was regaining strength. I should add that since the month of November, his voice had become normal and his cough had entirely disappeared. After a few days' rest, as the abdominal organs were far from having resumed their physiological functions, I prescribed afresh for him, and gave him small doses of Fowler's solution. May 11th, 1864, this patient, whose improvement had been progressive, and who was in tolerable health and flesh, committed a slight excess in drinking ; he soon afterwards perceived a protuberance in the frontal region, which he came to show me, and which proved to be an exostosis about the size of a pigeon's-egg and accompanied by nocturnal pains. I ordered him thirty grains of iodide of potassium daily in decoction of hops ; in three weeks the exostosis had disappeared. At that time the liver still projected two fingers' breadth beyond the edge of the ribs, the spleen was much smaller, the abdomen supple and free from flatus, and the patient considered himself quite cured, but in June, after a fresh excess, he observed a fresh exostosis on the forehead, again took iodide of potassium, and soon saw this affection disappear. At the same time he found his digestion impaired and had diarrhoea, which ceased spontaneously. Finding that the liver was still enlarged, I advised this patient to use a nitric acid drink.

Some time after, I was able to perceive an improvement in the digestive functions, but on the 26th of October, the frontal pains reappeared and the patient again took iodide of potassium for a month. From that time, December, 1864, his health has been good and continues to improve daily ; he is of average stoutness and feels very well. The spleen and liver, however, still project somewhat beyond the edge of the ribs. It may be added that the patient has long resumed his usual occupations, and that his wife is in an early stage of pregnancy.

Married at twenty-seven years of age, he soon begot a child which did not go the full time : his wife was delivered of a still-born child at six months. This woman, who is healthy, has never had any trace of syphilis ; four years ago she again became pregnant, and went five months only. Since the treatment to which I have subjected her husband, she has had a child at the full time.

In these cases, in which protuberances could be felt upon the surface of the liver, it is very probable that we had to do, as in most of the cases of reported cure, with the gummy form of hepatic syphilis. This form, consequently, is more amenable to treatment than interstitial hepatitis. This is a point which appears to be fully explained by the anatomical study. In interstitial hepatitis, in fact, the development of the new elements of conjunctive tissue is often complete, while, in the case of gummy tumours, these same elements,

by virtue of their number and disposition, are arrested at a given moment of their evolution, and become changed and absorbed.

A fatal termination, apart from the cases in which the ascites assumes considerable proportions and produces asphyxia, is rarely the direct consequence of syphilitic hepatitis, an affection which does not usually invade the whole liver; death is most frequently caused by concomitant affections, or by complications at the head of which are to be quoted erysipelas and pneumonia.

Diagnosis.—The functional derangements which correspond to the syphilitic affections of the liver differ little from those produced by most of the changes in that organ; on this account the most positive diagnostic data are taken from the study of the physical signs and of the characters of the syphilitic infection. Thus, the antecedents of the patient or the presence of cutaneous or osseous manifestations of the tertiary period are the circumstances which, in the case of a hepatic affection of a doubtful nature, give great probability to the hypothesis of a syphilitic origin. Neither must we forget the discoloration and bronzed tint of the skin, which may prove useful. But in the absence of these circumstances, and this is a fact which must not be forgotten, an exact diagnosis is still possible, when in an hepatic affection slow in its course the liver presents on palpation rounded, indurated knobs, or that deformity upon which we have already laid stress, especially if there be, at the same time, albumen in the urine and general cachexia.

The irregularity in the form of the liver, the albuminuria, and the cachexia form a triad of symptoms which has often enabled us to form a certain diagnosis of hepatic syphilis, in the absence of any external manifestation. Observation XXVI. p. 301, is an instance of this as regards deformity of the liver. In the patient who was the subject of the following observation, the sensation of firm, hard, and resistant inequalities on the surface of the liver, with a long-standing ascites of considerable amount, caused a belief in the existence of a material lesion of syphilitic origin, and the diagnosis was afterwards confirmed by the success of a specific treatment.

Exostosis of the tibia, laryngitis, tumour with hypertrophy of the liver.—*Dysenteric diarrhœa.*—Cure of all these symptoms after the employment of iodide of potassium for nearly a year.

Obs. XXXVIII.—M., a copper-smelter, æt. 35, entered la Pitié, Jan.

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23rd, 1861, under the care of Dr. Bernutz, where he remained several months.

The patient was intelligent, small, and of rather delicate constitution ; he denied having had any kind of primary venereal lesion, but thought that his father had suffered from syphilis. He stated that M. Ricord had formerly treated him for the same symptoms which now brought him to la Pitié. At the time of his admission M. was emaciated, with a dry, wrinkled skin, of a somewhat yellowish bronzed tint ; he complained of nocturnal osteocopic pains in the right tibia ; this bone was the seat of considerable hyperostosis in a great part of its extent. His voice was almost extinct and speech difficult, but the chief disease occupied the liver. That organ presented a considerable increase in size, projecting several fingers' breadth beyond the edge of the ribs and raising perceptibly the anterior wall of the abdomen in the right epigastric and hypochondriac regions ; moreover, on palpation, there were felt upon the anterior surface firm, resistant knobs, which were very hard and very perceptible. The patient complained of spontaneous pains in the region of the liver which were also caused by palpation or percussion, and also of a feeling of uneasiness or weight in the right hypochondrium. There was slight effusion into the peritoneal cavity. The appetite was moderate and the various functions were performed pretty regularly. During the month of February there supervened a sanguineous dysenteric diarrhoea, which lasted more than twelve days. Under these circumstances, the patient was subjected to a specific treatment ; at first, he took pills with proto-iodide of mercury, and afterwards iodide of potassium to the extent of thirty-seven and a half grains daily. Under the influence of this treatment, some improvement was observed, but it was generally very slow ; the pains disappeared rapidly, but the hyperostosis and the swelling of the liver continued for a long time. The treatment was continued for several months, which the patient passed in the hospital, and when he went out, there certainly was a great amelioration ; if the liver was still enlarged and somewhat irregular, the swelling of the tibia had almost entirely disappeared. After going out, M. continued to take the iodide of potassium and resumed his occupations.

I had an opportunity of seeing this patient in March, 1862, and ascertained the complete disappearance of the hyperostosis and of the enlargement of the liver ; this latter organ was not even discoverable by palpation, and no longer projected beyond the edge of the ribs. M. was also less emaciated and felt well, no longer complaining of his old lesions. He still continued the treatment, and when I again saw him a year later, his general health was perfectly good.

The chief affections which are sometimes confounded with the syphilitic changes in the liver are : cancer of the liver, the cirrhosis of drunkards and, more rarely, tubercular peritonitis.

The following case, in which first a cancer of the liver and afterwards tubercular peritonitis was diagnosed, is too striking an instance of the difficulty which may be encountered in similar circumstances

and of the advantage which may accrue from a complete examination of the patient, not to be given here together with the reflections to which it gave rise.

Gonorrhœa, buboes; gummy tumours of the hairy scalp, followed by depressions.—Iodide of potassium.—Tumour of liver, ascites, slight hæmoptysis.—Spontaneous cure of all these lesions.

Obs. XXXIX.—H., æt. 43, entered la Pitié, January 7th, 1860. He was a little man, but well built; he did not give account of any previous acute disease; he stated that his mother succumbed to a cold, and that his father died mad.

At the age of 18, H. had gonorrhœa and a bubo, and although he does not remember having had a chancre, it is probable that the bubo was connected with the existence of a specific ulcer. At all events, he asserts that he never had any spots or pimples on the skin. Five years ago, he observed numerous tumours upon the hairy scalp, and was treated by a physician of Lyons, who appears to have diagnosed gummy tumours and subjected him to specific treatment. This treatment was continued for a fortnight only; six weeks after, the tumours and the violent pains which accompanied them had entirely disappeared. Depressions more or less deep remained in the place of these tumours; one of these occupies the vertex, several others are met with at the root of the hair.

On admission, this patient complained of a violent cephalalgia, of about fifteen days' standing; he had lost his strength, was thin, with a dirty, somewhat bronzed tint of the whole cutaneous surface, and especially of the face. His legs were not œdematous, but the sub-cutaneous abdominal veins were dilated and the peritoneal cavity contained a certain quantity of fluid.

The liver projected beyond the edge of the ribs, especially at the epigastrium, in the neighbourhood of its lesser lobe, and at that point it is easy to detect one or more hard and resistant protuberances. The right lobe did not present anything very peculiar. The spleen was somewhat enlarged. There was nothing unusual about the urine. Digestion was slow and imperfect; there was diarrhœa of some days' standing. The lungs appeared intact and there was no derangement in the apparatus of circulation. A cancerous affection of the liver and perhaps also of the stomach was diagnosed and a treatment adopted in accordance therewith.

This condition lasted for several days without any appreciable change. Towards the end of January, the sub-cutaneous veins of the abdomen became more apparent, there was a larger quantity of fluid in the peritoneal cavity, the intestines became inflated, and the abdomen assumed enormous dimensions; the lower extremities became œdematous and contrasted by their size with the smallness of the upper extremities; the emaciation increased more and more. The patient had frequent attacks of epistaxis and spit a little blood. Nevertheless, in spite of the care

with which he was examined, it was impossible to detect at the apices of the lungs positive signs of a tubercular lesion. The appetite had remained partly good; the diarrhoea disappeared to return later on; there was no vomiting. There did not appear to be any ground for changing the diagnosis, in spite of the appearance of these new phenomena. The emaciation and cachectic condition of the patient seemed rather to confirm it.

Under these circumstances, a good friend of ours, now a hospital physician, subjected the patient to a careful examination and diagnosed *tubercular peritonitis*, the hepatic tumour being no longer explorable since the development of the abdomen. Far from improving, however, the condition of our patient became more and more aggravated, and he soon fell into a state of the most complete marasmus; moreover, he was threatened with asphyxia from the disproportionate development of his abdomen, and towards the end of March, his death was expected from one day to another. Nothing of the kind happened however. On the 6th of August, to our great surprise, his belly began to diminish in size and, three weeks afterwards, had almost resumed its normal state, without the least internal treatment having been employed; to satisfy the wish of the patient, the abdomen had been rubbed from time to time with camphorated oil of camomile. After the disappearance of the ascites, the hepatic tumour could still be felt; but it was much less prominent and hard and soon afterwards became inappreciable. From that time, the appetite became better, the expression of the patient's face no longer indicated the same state of suffering, and he gradually regained flesh. The improvement was rapid and soon very evident. The abdomen still continued slightly enlarged, but the patient got up and asked for permission to go to Vincennes. He went out on the 5th of June, complaining then only of formication in the thigh and cramps in the left leg.

Struck by a recovery so unexpected, I wished to make a fresh examination of this patient before his departure; then only did I discover the alteration in the bones of the cranium and get upon the track of the real disease. With greater perspicacity I should doubtless have arrived sooner at this diagnosis, as the patient complained of intense cephalalgia which continued for several days. The syphilitic disease once admitted, the hepatic lesion would naturally have been attributed to it, and then the indication for treatment became clear. Aided by this new information, I had to give up the diagnosis I had formed at first, for the fact of a cancer cured would, perhaps, be unique; on the other hand, it was not possible to assume the existence of tubercular peritonitis in presence of the tumefaction of the liver, which explains very well, moreover, both the ascites and the dilatation of the abdominal veins. Neither is it usual to see tubercular peritonitis disappear thus; but the same is not the case with syphilitic affections; these, as we know, become cured very well under the influence of an appropriate treatment, and this case proves, as it appears to us, that their cure may be spontaneous.

On the 24th of the following June, H. presented himself afresh at the hospital, where we had an opportunity of examining him. The depres-

Tubercular peritonitis shows itself at the outset by abdominal pains, vomiting, and diarrhœa, symptoms which are not observed in the affections into which we are now inquiring. The skin, moreover, retains its colour, or changes gradually, without ever assuming the bronzed tint which sometimes accompanies syphilitic hepatitis. That affection, moreover, frequently coexists with tubercular lesions of the lungs or pleuræ. On palpation of the abdomen there is felt a sensation of puffiness or diffused dulness, not met with in simple ascitic effusion.

Alcoholic cirrhosis, on the other hand, is usually preceded or accompanied by various derangements, such as dyspepsia, anorexia, formication, cramps in the extremities, hallucinations, &c., which render it impossible to overlook the poisoning from the abuse of spirituous liquors; moreover, it rarely fails to produce a considerable degree of ascites and exceptionally only gives rise to jaundice. The course of this affection is also more rapid than that of syphilitic cirrhosis.

Prognosis.—The syphilitic changes in the liver are evidently serious affections which place the life of the patient in danger, and which, when they are overlooked, sometimes occasion death. Ascites, hæmorrhages, and especially diarrhœa, are so many symptoms indicative of a state of things serious and liable to become fatal. These symptoms are, however, less formidable here than in any other disease, and the prognosis is far from being always unfavourable, since we can now quote a certain number of cases of cure. So long as the liver is large, the prognosis may be considered as more favourable; but of the two anatomical forms pointed out, the gummy form is that which presents the least danger.

§ 2. Syphilitic affections of the vascular blood glands.

Sauvages, Étisie syphilitique, dans sa *Nosologie méthodique*, t. iii. p. 253. *A. Dumoulin*, De la cachexie en general et de la cachexie syphilitique en particulier. Thèse de Paris, 1848. *Mounezet et Fleury*, Compendium de médecine pratique, t. viii. p. 67. *Hutchinson*, *Medical Times and Gazette*, July 17th, 1858; et *Gaz. hebdomad.*, March 4th, 1859, p. 143. *Moutard-Martin*, Dans l'*Union Médicale*, 1860. *Boys de Loury*, Du marasme ou cachexie syphilitique. *Gaz. hebdomad.*, 1859, No. 40. *R. Virchow*, La syphilis constitut. Paris, 1860. *Hutchinson and Jackson*, *Med. Times and Gaz.*, October, 1862. *Frickhofer*, in *Nassauer Correspondenzblatt*, 10, 1860. *Mosler*, in *Berlin Klinik Wochenschrift*, pp. 15 to 25, 1864.

A serious motive has induced us to study simultaneously and in

a single paragraph the syphilitic affections of the vascular blood glands: this is, a great analogy in the anatomical characters of the morbid process. Formed after the same type, endowed with analogous if not identical functions, susceptible of very similar anatomical derangements, these organs, whatever their seat may be, when affected by syphilis, concur in a synergical fashion in the modification of the blood and in the production of those peculiar states of the organism known under the name of *chloro-anæmia* and *cachexia*.

Closed vesicles, a web of conjunctive tissue, vessels and nerves, such is the elementary constitution of the vascular blood glands. Two kinds of elements, consequently, some special, others common to all the organs, glandular elements, elements of conjunctive tissue, enter into the composition of these organs as into that of most of the glands. But while the interstitial conjunctive substance is, in these latter, the sole seat of the morbid syphilitic localisation, the syphilitic agent exercises here a special action upon each of the two elements and modifies them, sometimes singly, sometimes simultaneously.

ANATOMICAL STUDY.

The changes which affect the fibrous web do not differ from those which we are already acquainted with; they present the same anatomical types, assume the same forms, and always consist in a new diffused or circumscribed conjunctive formation. The diffused change is partial or general, the diseased gland becomes injected, a part or the whole of it becomes increased in volume; later on, it becomes atrophied under the influence of the retractile properties of the new tissue. The follicles decrease in size, become necrosed, and lose their functions. All the vascular blood glands are susceptible of this change, which is most frequently met with, however, in the spleen and lymphatic glands. The circumscribed deposits constitute small tumours more or less firm, rounded and yellowish, which present no marked difference from gummy tumours of the other viscera. The spleen, the pituitary body, the thymus, are the most usual seat of these products, the presence of which has rarely been pointed out in the other blood glands.

The special anatomical modification which affects the element peculiar to the blood glands has been very well described by Virchow. In the lymphatic glands, which have more particularly served for the researches of that author, the change recognises three

stages: the hyperæmic, the medullary, and the caseous. The first of these stages commences with injection and serous imbibition, followed by enlargement of the lymphatic cells and their multiplication. The follicles of the glands thus become larger and put on the appearance of white or greyish points, separated by solid interstices. The gland, which is generally softened, yields to pressure and slips about under the fingers; but at the same time, if there be proliferation of the elements of conjunctive tissue, it assumes a uniform, reddish, or greyish white aspect, and under these circumstances it differs from the glands in typhoid fever, leucocythæmia, scrofula and tuberculosis, by appearing paler and more moist. The cellular hyperplasia which characterises the second stage, leads to acute softening or to suppuration if it be developed rapidly; if, on the contrary, this development be slow, the young cells formed by the proliferation of the glandular tissue become changed, retrograde, are transformed, and fatty, tubercular, or caseous metamorphosis forms the last stage of this pathological evolution.

The lymphatic glands are not alone subjected to this form of change; there is every reason to believe that the spleen and thyroid body are not exactly exempt from it. It is a fact that increase in volume of these latter organs is very frequent in the last stage of syphilis, since it is found to be mentioned in most of our observations.

Such are the changes in the vascular blood glands, the peculiar characters of which, and their frequent appearance at a certain period of syphilis, serve to prove an ætiological relation to that disease. Let us add to these changes the coexistence, in certain cases, of an amyloid and lardaceous degeneration analogous to that which we have already observed in the liver, and which does not, any more than the latter, appear to be directly connected with syphilis.

These general anatomical data once established, let us go into the details of the peculiarities which each of the glands in question presents.

PITUITARY BODY.—A case of syphilis given by Meyer mentions the existence, upon the sella turcica, of a doughy, elastic tumour of the size of a small nut, attached to the bone. Was the pituitary body its seat? I do not know; but it appears probable that it had been the starting-point of it. In a case reported by Virchow, this gland, increased in size, presented here and there some protuberances of a greenish yellow, caseous appearance, disseminated in

a greyish yellow tissue (*loc. cit.*, Obs. X. p. 141). A gummy lesion of the pituitary body is very probable here. This lesion has appeared to us evident in a case which we have ourselves observed and published elsewhere.* Moreover, we have many times seen the pituitary gland modified and enlarged in the course of visceral syphilis.

THYROID BODY.—The change in this gland is mentioned in several of the cases which form part of this work. A very manifest and for the most part generalised increase of volume, a consistence more or less firm with yellowish colour in places, such has been the aspect under which this organ has most frequently presented itself to the naked eye. The microscopical examination has revealed to us an increase in the number of the glandular elements, together with a more or less complete fatty metamorphosis. We do not know of any case which gives evidence of a gummy deposit in the substance of this gland; but this is perhaps a consequence of the negligence with which post-mortem examinations are still too frequently made. The thyroid body is none the less frequently enlarged, however, in women affected with syphilis of long standing.

THYMUS.—The study of the syphilitic changes in this gland will be made when we enter into the question of hereditary syphilis.

SUPRA-RENAL CAPSULES.—Like the thyroid body, the supra-renal capsules are, in general, enlarged in persons who succumb to the attacks of visceral syphilis; such at least results from the observations of Professor Virchow (Obs. V. and VII.) as well as from our own. In addition to the increase in size, the learned Professor has observed in one case † a complete fatty degeneration of these glands, which were also found occupied by tumours which might well be nothing other than gummy deposits.

SPLEEN.—The changes which have been met with in this organ are: sometimes partial or general splenitis, sometimes gummy deposits, and lastly, a hypertrophy from augmentation of the cellular contents or of the pulp.

Virchow describes the first of these changes as follows:—"Under the influence of a moderate hyperæmia, some parts of the splenic parenchyma become tumefied; sometimes deposits are formed in one or other of the lobes, sometimes the change extends irregularly

* L. Gros et Lancereaux, *Des affections nerveuses syphilitiques*, 1861, Observ. CXXIV. p. 124.

† *Wurzburg. Verhandl.*, Vol. VIII. p. 368.

throughout the whole organ. The affected points are hard when cut, they appear darker, drier and more consistent. Sometimes they are of a blackish red colour and resemble hæmorrhagic deposits, and it is even difficult to distinguish them from inflammatory congestions. Later on, the redness disappears, especially at the centre; the tissue of the organ, while becoming drier and harder, takes on a paler colour; sometimes, on the contrary, it is of a greyish red. From this moment, the augmentation of the conjunctive tissue is evident. At the points where the change takes the form of a deposit, there is afterwards seen a retraction, a thickening, and a cicatricial depression, as we have seen in the syphilitic lesions of the liver, the testicle, and the iris. White and thickened in such cases, the fibrous capsule of this gland generally adheres to the diaphragm (perisplenitis)."

Gummy deposits show themselves in the spleen with their usual characters, that is to say in the form of rounded, whitish or yellowish nodosities, single or multiple, and more or less deep-seated. These manifestations are comparatively rare, a few cases only giving evidence of their existence. Willis has given a sketch which represents one of these tumours situated in the substance of the splenic parenchyma, near the fibrous capsule. Hutchinson and Jackson have given two cases in which a similar change is mentioned, and it would perhaps be possible to connect with these different cases an observation by Meyer, in which the spleen, developed and increased in size, presented whitish deposits upon its capsule [Obs. VI.*]. A simple increase in the volume of the spleen is, on the contrary, frequent, at least in the cases which we have ourselves observed. But since no mechanical impediment to the hepatic circulation existed, and since there was no other cause to explain the existence of this change, we are almost compelled to attribute this modification to the syphilitic diathesis. The organ generally measured from six to eight inches; its consistence was soft, its colour brownish, mottled, and of a greyish white at some points. The microscope showed in it granular elements in the process of retrograde evolution.

DEEP LYMPHATIC GLANDS.—The study of the syphilitic changes of these glands has only been made within the last few years. Swediaur admits that in his time no authentic observation of these

* See *Schmidt's Jahrbücher*, t. cxiv. p. 312, 1862.

lesions existed. In the present day, deep-seated tertiary lymphatic adenopathies are better known anatomically than superficial or subcutaneous adenopathies. The reason of this is that there are more opportunities of making a post-mortem examination of them.

The glands of the abdomen, and especially the prevertebral and lumbar, the iliac and femoral glands, are those most frequently attacked. Next in order are the bronchial and mediastinal glands; the mesenteric glands are much more rarely affected, and the same holds good for the glands of the extremities.

Is it possible to establish a relation between this glandular change and the lesions of the viscera? The answer to this question is still difficult. We do not, however, believe so, for we have frequently met with tertiary changes in the lymphatic glands without finding any morbid manifestations in the corresponding organs.

The microscopic characters of these adenopathies are, in general, very variable, which is attributable to the form of change of which the glands are the seat. If there be a diffused lesion of the web, the gland, which becomes enlarged at first, gradually diminishes in size, changes colour, and becomes indurated; it is then composed almost uniquely of conjunctive tissue.

When the case is one of gummy deposit, the lymphatic glands increase in size and assume a rounded form; firm in consistence at first, they are afterwards soft, caseous and even fluctuating. If there be hyperplasia of the glandular elements (which is perhaps most frequently the case), the gland puts on a peculiar appearance: it increases especially in its greatest diameter, that is to say, in length rather than in thickness, to such an extent that it may attain $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$ or $\frac{1}{2}$ of an inch. Friable and somewhat soft in consistence, it presents an injected surface of a pink, reddish, or yellowish grey colour. On section, the same colour is usually observed; but touch gives the sensation of a medullary or caseiform substance, according to the degree of evolution or of change of the constituent elements.

Apart from the characters which we have just pointed out, the syphilitic lesions of the lymphatic glands are distinguished from the lesions occasioned by typhoid fever, tuberculosis and scrofulous disease, by their seat, their peculiar form, and lastly by the constant absence of suppuration. Let us add that, in the tubercular and scrofulous affections of the glands, amyloid degeneration is met with more frequently than in syphilis.

The glandular lesions of which we are treating should be placed amongst the most frequent and most constant changes of the period we are now considering; they are to visceral syphilis what the subcutaneous lymphatic adenopathies are to the syphilitic affections of the skin, that is to say, an almost necessary concomitant. These are, in fact, always met with when a visceral affection exists; and sometimes, they are observed in cases where this latter is wanting. The study of them is, consequently, very important and in every respect deserves our attention.

BLOOD.—With the anatomical derangements of which we have just been speaking is most frequently connected a modification of the blood which has incorrectly been regarded as a direct action of the poison. The individuals who succumb at this advanced period of syphilis have a scarcity of blood, evidently diminished in quantity and changed in its composition. But what is this change? In what does it differ from that which is met with at the commencement or during the course of the secondary period? This is a point which we are unable to elucidate at this moment, and which requires for its clearing up further researches. At all events, the blood is fluid rather than thick, rarely contains fibrinous clots, and sometimes stains the parietes of the heart or vessels. The red globules, which are few in number, appear in their usual form and size; the white globules are comparatively more numerous, and, if Virchow is to be relied upon, a true leucocytosis exists in such cases. We ourselves have several times observed, at this period of syphilis, an increased number of white globules, too rarely, however, to be able to accord to this state of things any real importance; for on the other hand, we have seen the white globules retain their normal proportion in cases in which the change in the blood glands might have led to the assumption of the existence of leucocytosis.

Hæmorrhages, which are observed chiefly when the liver is affected, would seem to indicate that there is a decrease of fibrin; but this is no more than a simple assumption. The appearance of anasarca would lead to an analogous assumption in reference to the albumen.

SYMPTOMATIC STUDY.

We shall pass in review successively the physical signs furnished by the changes in the vascular blood glands, and the functional derangements which these glands, when diseased, may occasion in

their vicinity. We shall then turn our attention to the general derangements which result from the various anatomical modifications effected by syphilis in the substance of these glands.

Physical signs.—These signs are appreciable only in cases of a change in the spleen. Percussion, in these cases, usually reveals the existence of dulness over a more than normal extent of surface. Palpation even frequently admits of our ascertaining the size of the organ, if it project beyond the edge of the ribs. This mode of exploration may also, though rarely only, tell us the condition of the deep-seated lymphatic glands, of those at least in the iliac and upper femoral regions.

Symptoms in vicinity.—Apart from the influence which an enlarged spleen may exercise upon the functions of digestion and respiration, and the possibility of a compression of the air-tubes by the enlarged bronchial glands, these symptoms only exist, in general, if the pituitary body become affected. Then, in fact, may arise cerebral derangements resulting from compression of, or even a secondary change in, the nerve substance. These various derangements usually consist in convulsive attacks and imperfect vision.

General derangements.—These derangements without special localisation, and which affect the whole economy, are no other than those known and described under the name of *cachexia*. Syphilitic cachexia is thus only a symptom connected with the change in the vascular blood glands, to which is added most frequently a change in the liver. All authors, I know, do not agree upon this point, or share this opinion. It is only after mature reflection, therefore, that we have determined to introduce here the study of this peculiar condition of the economy, and after the cases published, as well as our own experience, have convinced us of the existence of a necessary relation between the anatomical change in the blood glands on the one hand, and the general derangement of the organism on the other.

A patient who has previously manifested only symptoms in accordance with the local lesions, sees gradually supervene a derangement of all his functions and a general wasting away of his whole organism. In fact, the principle which supports the life of the organs and maintains the harmony of the functions, the blood, is vitiated in its essence, and changed in its composition. The appetite becomes lost, notable derangements of digestion supervene, the breath stinks, even in the absence of ulcers of the mouth or throat; there is nausea and

sometimes vomiting ; diarrhoea, which does not always occur at the commencement, recurs at intervals more or less long, and constitutes in some cases a true lienteric or even dysenteric flux. Vague erratic pains, more or less acute, are felt in different parts of the body, especially in the head, and there is sometimes obstinate insomnia.

Not only does the patient become emaciated,* but his muscular system becomes manifestly atrophied and he loses his strength ; his complexion loses its brightness ; the skin of the extremities dries up and becomes covered with epidermic scurf, assuming a dull and earthy look ; that of the face looks leaden or yellowish. The colour generally varies according to the viscus more particularly affected. The features express suffering, a state of discomfort, anxiety and depression which is quite peculiar. The least exercise causes fatigue and is accompanied by shortness of breath and palpitations. At this period, it is not uncommon to find a bellows sound near the heart and in the vessels of the neck, and to find menstruation suppressed in women. To these symptoms, already pointed out by earlier writers, is added, in certain cases, an anasarca more or less generalised. Lastly, there is a slight febrile condition, at first erratic and characterised by rigors returning at intervals, then continuous, with a small and frequent pulse, dryness of the mucous membranes, and sometimes a sweating skin. The fever is nevertheless a rather rare symptom, even in the last stage of the disease, unless some complication, such as pneumonia or erysipelas, occur, affections of which we shall have to speak again further on, because they are often, under such circumstances, the immediate cause of death.

Diagnosis.—The physical signs furnished by the examination of the organs and the derangements which accompany them are the elements necessary for the diagnosis of syphilitic changes in the blood glands. The physical signs will serve to show the existence

* Let us remark here that certain syphilitics, after having presented for a longer or shorter time a state of considerable emaciation, all at once become disproportionately stout. This is a circumstance which did not entirely escape the earlier observers. Mentioned in *Aphrodisiacus* (see p. 1221), it appears to have been alluded to by the anonymous author of the *Triumpe de très-haulte et très-puissante dame Vérolle* in the following phrase : Les uns boutonnants, les autres refondus et engraisés, les autres pleins de fistules lachrymantes, les autres sont courbés de gouttes nouées."

of the anatomical modification; the general derangements will contribute to the determination of its nature: thus we shall gain useful indications from the state of the skin, from its smoothness, its dryness, and especially from its colour; from the emaciation of the patient, and from the habitual absence of a febrile condition, &c. As these indications are, however, rarely sufficient, it will be necessary to consult the antecedents of the patient and to inquire carefully whether there do not exist some manifestations susceptible of being connected with syphilis.

The visceral lesions which present the closest analogy to the pathological conditions we are now examining are those which are observed in chronic miasmatic poisoning and in scrofula. In the former, as in syphilis, there is a change in the blood glands with increase of size, but the hygienic conditions and morbid antecedents of the patients are very different; in miasmatic cachexia, moreover, the skin generally puts on a more yellowish (dead leaf) tint, and anasarca and fever are symptoms much more frequent than in syphilitic cachexia.

Like syphilis, scrofula also occasions, at a certain period of its evolution, an enlargement of the liver and blood glands with cachexia; but there again the morbid antecedents are different and there are, moreover, peculiar and suppurative lesions of the bones.

The fever and perspirations which accompany tuberculosis in a somewhat advanced stage will not permit of confounding that disease with syphilitic cachexia. The latter will also be distinguishable from the cachexia of cancer, in which the soft, thin, fine, and satiny skin assumes a yellowish rather than a bronzed tint.

Edema of the extremities, again, is more common in the two last diseases than in syphilis, in which it only exists in so far as it is connected with venous thrombosis.

Prognosis.—The prognosis of the affections of the hæmopoietic glands which supervene at this period of syphilis cannot be otherwise than very unfavourable. The functions of these glands once interfered with, the organism is, in fact, placed in most untoward conditions; the modification which these glands effect in the fluid blood destined to maintain the life of the organs and the play of the wheels of the organism place the latter in a kind of vicious circle from which it is difficult for it to escape.

Moreover, if these lesions be somewhat extensive, therapeutic agents are without effect. Specific treatment is then often a mistake. The

wasting makes progress, then marasmus supervenes, the cachetic condition becomes more and more marked and too often ends in death.

ARTICLE VI.—APPARATUS OF THE CIRCULATION.

Syphilis does not extend its action with the same frequency to all the organs which constitute this apparatus, and that, doubtless, in consequence of the difference in structure peculiar to them. The heart and its coverings are the most frequently affected. Then come the arteries, for there is no doubt that certain arterial lesions are attributable to syphilis. As regards the veins, there is no authentic case yet to show that they have ever undergone the attacks of that disease.

§ 1. *Syphilitic affections of the heart and its coverings.*

Ricord, Clinique iconographique de l'Hôpital des vénériens, planche xxix.; et *Gazette des hôpitaux*, August, 1845, No. 101. *Lebert*, Atlas d'anatomie pathologique, t. i. pl. lviii. *L'honneur*, Bulletin de la Société anat., 1856, p. 12. *R. Virchow*, La syphilis constitutionnelle. Paris, 1860, p. 108. *S. Wilks*, On the syphilitic affections of internal organs, p. 41. *Ruth. Haldane*, *Edinb. Med. Journ.*, t. viii. p. 435, September, 1862. *Lancereaux*, *Gazette hebdomad. de médecine et de chirurgie*, 1864.

The existence of these affections in early times cannot be denied, although they have of late almost entirely escaped the attention of observers. Without any doubt, a careful retrospective study would enable us to recognise them, in some cases, described under the name of cardiac induration, of tubercles, or of cancer of the heart. Amongst the cases collated by Professor Bouillaud,* some present so great a resemblance anatomically to our own that there is reason to believe also in an identity of the nature of the disease. The pericardium and the heart may be affected separately or simultaneously.

A. SYPHILITIC AFFECTIONS OF THE PERICARDIUM.

Wilks and Virchow admit the existence of syphilitic pericarditis. The latter of these authors relates a case in which membranous cords

* *Traité des maladies du cœur*, 1835, tome ii., art. *Tubercules et Cancer du cœur*.

united the heart to the pericardium; there was at the same time myocarditis. No other observer, so far as I know, has spoken of this manifestation. Nevertheless, in spite of this silence, which gives evidence of the rarity of syphilitic lesions of the pericardium,* I cannot hesitate to attribute to syphilis the changes which this sero-fibrous membrane presented in two cases observed by me.

In one of these cases, the thickening of the pericardium resembled to a certain extent the interstitial phlegmasia of the parenchymatous organs; in the other, the existence of a projecting tumour on the internal surface of that membrane was evidently not without analogy to the gummy tumours of those same organs. This tumour, moreover, which was about the size of a small nut, of a yellowish colour and somewhat soft consistence, coincided with other syphilitic changes and presented all the objective characters of gummy tumours at the same time that its histological composition was the same as theirs.

No functional derangement resulted here from the anatomical change; but it is easy to understand that it may be otherwise, and that a gummy tumour projecting into the cavity of the pericardium may impede the movements of the heart, produce a friction sound, and sometimes even become the starting-point of a secondary pericarditis.

Thus, diffused or circumscribed gummy deposits and chronic membranous pericarditis are the changes which, in very rare cases, present themselves in the pericardium; but while the gummy deposit may be independent of any cardiac lesion, simple pericarditis is most frequently connected with an anatomical change in the muscular substance of the heart.

B. SYPHILITIC AFFECTIONS OF THE HEART.

Corvisart was one of the first † who sought to establish an ætio-

* In a case of Wagner's there is question of a gummy deposit upon the pericardium; but the existence of syphilis is not made clear enough.

† Portal (*Anat. Médicale*. Paris, 1803) says that the venereal poison may produce erosion of the heart and weaken its walls. Not being able to resist the effort of the blood, these yield, and the cavities of the heart become enlarged and dilated. This is proved by numerous observations of Morgagni, Sénac, Licataud, &c. These observations are far from being conclusive.

logical relation between syphilis and cardiac affections. From the resemblance of the vegetations upon the valves of the heart to venereal excrescences upon the genital organs he infers the identity of the origin of these morbid products.*

No doubt the idea was a good one, but it rested upon only a coarse and very deficient analogy, and Laennec † felt called upon to doubt the opinion of his illustrious predecessor. Later on, Bouillaud, framing the remarkable law of coincidence of cardiac affections and articular rheumatism,‡ showed that it was necessary, in the cases given by Corvisart, to recognise rather the influence of the rheumatic affection than that of syphilis. Julia endeavoured,§ however, to defend the views of Corvisart by relying upon the same comparison. But what he says of the ulcers of the heart is not fitted to bring conviction. Moreover, like most of the syphilitic changes in the viscera, those in the heart can only be compared to the tertiary lesions of syphilis. We meet again there, in fact, with the same anatomical forms which we had already observed in the voluntary muscles.

Interstitial syphilitic myocarditis.—This form most frequently coincides with the gummy deposits in the heart. In a case observed by Virchow there existed simultaneously a gummy myocarditis of the right side of the heart and a simple myocarditis of the left ventricle. This ventricle was dilated everywhere but chiefly anteriorly and to the left. Towards its apex there was a diverticulum capable

The following case, quoted in the *Mémoires de la Société royale de Médecine*, 1775, is not, perhaps, without some value in this respect.

A young woman æt. 22, died in the Hospital of Refuge at Perpignan, after having presented the most severe symptoms of constitutional syphilis, with cardiac symptoms and acute pain in the region of the heart shortly before death. The *post-mortem* examination showed a large ulcer, which occupied the posterior surface of the heart to the whole extent of both ventricles. At the bottom of this ulcer were found only a few muscular fibres, which formed a very thin layer and were broken by slight pressure of the finger. The neighbouring cardiac substance was plainly indurated; the heart was 11 inches 8 lines in circumference below the auricles, and the ulcer 9 inches 2½ lines.

* *Essai sur les maladies du cœur*, p. 89, édit. de l'*Encyclopéd. des sciences méd.*

† *Traité de l'auscultation*, t. iii. édit. Meriadec Laennec. Paris, 1831.

‡ *Traité des maladies du cœur*. Paris, 1835.

§ *Gazette médicale de Paris*, 1845.

of admitting a nutmeg into its cavity, which was lined with a much-thickened, sclerosed endocardium and partly filled by a thrombus adherent to its walls. The two papillary muscles of the mitral valve were almost entirely shrivelled and transformed into hard and flattened cords, formed of a whitish tissue, analogous to that of cicatrices; at their extremity, the muscular fibres still existed. The tendinous fibres, especially those of the posterior papillary muscle, were shortened and a little thickened. The anterior portion of the mitral valve was also thickened. In nearly the whole extent of the ventricle, the endocardium was of a bluish-white or yellowish, dull colour; it was thickened, uneven, mammillated, and presented its normal characters only at the base of the ventricle and in the neighbourhood of the septum. Beneath the endocardium, the muscular tissue of the heart had disappeared, and was replaced by a comparatively very vascular fibrous tissue, which appeared œdematous and very different to the hard, rigid, and almost sclerosed endocardium; at several points of this tissue there existed flattened or rounded tuberosities, of a yellowish white colour and dry, firm, resistant, caseous consistence.*

In the only case in which this change has presented itself to my observation in the absence of gummy deposits, it also occupied the left ventricle. Less extensive than in Virchow's case, it was characterised by the presence of a whitish fibrous tissue, studded in some parts with yellowish spots. This tissue formed in the ventricular wall intersections† comparable to a certain extent to those seen normally in certain of the voluntary muscles, especially in the recti. The heart was increased in size.

Such is syphilitic myocarditis at a certain period of its evolution. If we follow it in its different phases, which is easily done, because the standing of the disease in the various points affected is usually very different, the following is what we observe: first of all, the

* *Loc. cit.*, p. 111 *et seq.*

† On following in the field of the microscope the muscular fibres which terminated at these fibrous intersections we could observe the progressive disappearance of the contours of the myolemma and convince ourselves that that was the starting-point of the new formation. The nuclear multiplication observed leads us to think that in some cases, at least, the muscular fibres of the heart are susceptible of undergoing a true fibrous transformation.

appearance of rounded nuclei in the substance of the sarcolemma or in the connective web, formation of cells and fibres of conjunctive tissue, vascularisation; then at some points fatty metamorphosis of the nucleolar and cellular elements, whence the yellowish colour mentioned above; at the same time, and secondarily to the formation of conjunctive substance, granulo-fatty degeneration of the muscular fibres the contents of which may be completely absorbed.

Thus characterised, this form of cardiac syphilis, which does not differ from diffused syphilitic myositis, must be distinguished from the myocarditis of rheumatism and from that sometimes produced by the prolonged abuse of spirituous liquors. If we consider their objective characters only, these various changes are difficult to separate from each other; fortunately, however, other characters enable us to distinguish them; in the case of a rheumatic affection, it is the almost constant lesion of the orifices and valves of the heart; in the case of alcoholic poisoning, it is the excess of adipose matter at the base of the heart, the yellowish colour and fatty degeneration of the muscular fibres beyond the region invaded by the phlegmasia.

Gummy myocarditis.—The lesions connected with this form differ so greatly from other cardiac lesions that it may be asserted positively that they present an indisputable specific stamp.* The description we are about to give of them is founded upon the analysis of eight cases furnished by various authors and by ourselves.† In these cases, the cardiac affection had for its seat—

Both ventricles	.	.	.	.	Twice.
The left ventricle	.	.	.	.	Twice.
The right ventricle	.	.	.	.	Twice.
The interventricular septum	.	.	.	.	Once.
The right auricle	.	.	.	.	Once.

* We may convince ourselves of the truth of this assertion by examining the figures in Ricord's Iconography and Lebert's Atlas.

† Of these cases were given by—

Ricord	.	.	.	.	.	1
Lebert	.	.	.	.	.	1
Lhonneur	.	.	.	.	.	1
Virchow	.	.	.	.	.	1
Wilks	.	.	.	.	.	1
Lancereaux	.	.	.	.	.	2
Haldane	.	.	.	.	.	1

The walls of the cavities of the heart are, therefore, the usual seat of the change, the valves and orifices most frequently remaining intact; such is the first datum furnished us by this analysis, and it is certainly not without interest, for it may already serve to differentiate the syphilitic affections of the heart from rheumatic lesions. Can it be said, however, that the orifices of the heart, with their fibrous structure, altogether escape the action of syphilis? I think not, especially after a case which I have very recently observed.

In a man at the post-mortem examination of whose body I found exostoses, perforation of the bones of the cranium, and a liver studded with depressions and cicatricial furrows, there existed at the same time a thickening of the free edge of the mitral valve at one point. The tricuspid valve presented a similar thickening and, further, at its middle portion, a perforation nearly $\frac{3}{4}$ of an inch in diameter. The chordæ tendineæ belonging to this valve were atrophied, the columnæ carneæ firm and whitish, with an abundance of fibrous tissue.

When it contains gummy deposits only, the heart does not become sensibly enlarged; but this is no longer the case when to the gummy change is added a myocarditis. Two circumstances then contribute to render this organ more voluminous: on the one hand, thickening of the ventricular wall, on the other, consecutive dilatation of the diseased ventricle. Under these circumstances, its form is modified by the fact of the relative predominance of one cavity over the other. However this may be, the consistence of the cardiac tissue is firm, and its resistance great wherever the muscular elements are replaced by fibrous tissue. At these points, the tissue of the diseased walls creaks under the knife. The external surface of the organ, which is whitish or slightly discoloured, still retains its smoothness and is rarely uneven. Small yellowish tumours sometimes project from its internal surface. The endocardium is thickened, whitish, hard, in some places as it were cartilaginous, and always closely adherent to the subjacent tissue. It is in the substance of this tissue, in the thickness of the muscles, or in the fibrous web which replaces them, that the gummy deposits are situated. These are usually rounded, more or less regular, and of the size of a pea; sometimes they have the size and shape of a cherry-stone or a bean.

Of a firm or caseous consistence, and a greyish or yellowish white colour, these tumours are enveloped in a kind of vascular, greyish, fibrous atmosphere, are homogeneous on section, dry rather than

moist, and do not differ, as regards their microscopic characters, from gummy tumours of other organs; they are composed of the same elements of conjunctive tissue, sometimes at the period of progressive evolution, sometimes at the period of regression. The muscular fibres included in a change of this nature are always more or less considerably modified. They may present every degree of granulo-fatty change, from a scarcely granular state to the complete disappearance of the contents of the sarcolemma; their colour is in accordance with the greater or less abundance of the fatty granulations deposited in them.

The syphilitic deposits in the heart are liable to the same pathological evolution as gummy tumours of the cellular tissue and of the muscles, that is to say that, from the fact of the regressive metamorphosis which they are destined to undergo, they gradually become softened, and if not absorbed, may occasion ulceration of the neighbouring parts; hence the possibility that the substance of which they are composed may enter the cavities of the heart, producing emboli and general infection, as appears to be demonstrated by a case observed by Professor Oppolzer.

A man previously affected with syphilis was suddenly seized with hemiplegia, and died in a few days. At the post-mortem examination there was found softening of the middle lobe of the right hemisphere, with obliteration of the artery of Sylvius. Below the aortic valves existed two small orifices, leading to a cavity capable of containing a bean, and which appeared to have been produced by the softening of a gummy tumour.* Let us refrain, however, from concluding from this solitary case that gummy tumours may frequently empty themselves into the cavities of the heart; it is by no means the case. In fact, the endocardium, being generally thickened, opposes itself to this untoward termination.

Let us add, to complete the study of cardiac lesions in syphilis, that twice, in cases observed by ourselves, the walls of the left ventricle, very sensibly thickened, presented on section a smooth, shining, lardaceous-looking surface, of a yellowish grey colour, and a slightly unctuous consistence. The ventricular cavity was at the same time dilated. This change, characterised histologically by the transformation of the muscular fibre into a homogeneous and shining

* See *Schmidt's Jahresb.*, 1860, p. 89 *et seq.*, article by Meissner.

mass, may be compared to the amyloid degeneration which we have seen in the liver, whence a certain degree of resemblance between the syphilitic lesions of the organs of the abdomen and those of the heart. The latter are, to sum up, simple myocarditis and gummy myocarditis, accompanied or not by endocarditis or pericarditis, and lastly lardaceous degeneration which, as we already know, has an indirect relation only to syphilis.

I should only be repeating here what I have already said if I attempted to enumerate the characters which distinguish gummy tumours of the heart from tubercular and cancerous neoplasms; these latter lesions, moreover, are always secondary when they attack the heart.

SYMPTOMATIC STUDY.

Most of the cases which serve for our analysis furnish, it must be admitted, only very incomplete symptomatic data. The fact is that an unexpected or sudden death has most frequently carried off the patients before they had been thoroughly examined. The following are, however, the symptoms such as they have been observed, of which some are functional, others physical. Palpitations were rarely absent, they were energetic, violent, accompanied by a strong impulse in the pericardial region, and by an evident derangement of the movements of the heart, which derangement made itself known in the pulse by irregularity and feebleness more or less considerable. A sensation of dyspnoea and oppression during the last days of life was further added to the preceding symptoms. Several patients have complained of acute pain and uneasiness in the precordial region; there were observed, discoloration of the skin of the face, a slight degree of cyanosis of the lips, and œdema of the extremities generally of small extent. The veins of the neck and extremities were most frequently distended and towards the end, all the symptoms of failure of the heart's action supervened.

Percussion showed increased dulness in the cardiac region. Auscultation revealed deadened sounds, and twice a very slight blowing sound accompanied the first stroke, with its maximum at the apex. I content myself here with mentioning again the symptoms of secondary infection pointed out in Oppolzer's case.

The course of the affections I have just been describing has always been slow, progressive and insidious. Their duration, which is generally long, is almost impossible to determine, on account, precisely,

of the difficulty of ascertaining the time at which they commenced.

Death has been the constant termination of the cases which I have quoted. Occurring slowly and gradually in three cases, in one it was rapid and in four almost sudden and probably the result of a primary arrest of the movements of the heart. This result should not surprise us when we remember that the ventricular walls are the special seat of the change. It must be borne in mind, however, that death is not a necessary consequence, and that recovery may take place so long as the muscular fibre is not destroyed.

A patient whose case we were enabled to follow for nearly six months furnished the proof of what we have advanced. The case was that of a young, well-formed man, whose general health was good, in whom, at the time of his admission into the Hôtel-Dieu, we found together with slight œdema of the extremities so great an enlargement of the liver that that organ descended as far as the umbilicus. Its surface did not appear smooth but slightly knotty; the heart, which was very little enlarged, did not present any abnormal sound, but its movements were very irregular and the patient complained of an oppression which dated from several months back; the other organs were healthy. Despite the absence of avowed antecedents, the patient, on account of the state of his liver, was put upon a specific treatment, and for several months took iodide of potassium. But, under the influence of that drug, we saw the oppression disappear, the heart regain its regularity, and the liver diminish in size to such an extent as no longer to project by more than one or two fingers' breadth beyond the edge of the ribs. The cachexia, at the same time, was replaced by a certain degree of stoutness.

Diagnosis.—In the heart, as in the other viscera, syphilitic affections have no true pathognomic symptoms. Moreover, to recognise them, we must first diagnose the general infection. I shall venture, however, to point out that these affections constitute in the class of cardiac diseases a distinct group and one which it is, to a certain extent, possible to differentiate from rheumatic affections. Indeed, taking into consideration their localisation in the thickness of the muscular parietes, syphilitic affections of the heart manifest themselves almost solely by oppression, dyspnœa, irregularity in the movements of the heart and inequality of the pulse, while rheumatic affections, which have for their usual seat the valves of the left side

of the heart, are generally accompanied by an intense blowing sound and by a greater amount of œdema. Rheumatic myocarditis, alcoholic myocarditis, and secondary dilatations of the cavities of the heart sometimes not giving rise to any blowing sound, more resemble syphilitic affections of the heart, the more so as, like these latter, they manifest themselves at a certain period by phenomena of asystole. Under these circumstances, the antecedents of the patient and the existence or absence of cachexia will be a great help for the diagnosis.* The following case may give an idea of the difficulties which are met with in such cases and of the possibility of surmounting them.

A woman aged 37, entered the Hôtel-Dieu to be treated for exostoses situated upon the tibiae. This woman, who was of average strength and constitution, had never had any serious disease, but six years ago she had contracted syphilis. It was evidently to that disease that the exostoses with which she was affected were to be attributed. But she was, moreover, pale, emaciated, and her liver projected three fingers' breadth beyond the edge of the ribs. She had shortness of breath, a feeling of oppression in the precordial region, and violent palpitations. Percussion showed that the heart was enlarged, and auscultation revealed a slight blowing sound. The movements of the organ were irregular, the pulse feeble and compressible. Not seeing anything to explain the derangements of the heart and liver, I suspected that the lesions of those organs might be connected with syphilis, and my opinion was afterwards confirmed by the effect of treatment with iodide of potassium.

Prognosis.—If we were to rely solely upon the cases which have served for our analysis, it would result therefrom that cardiac syphilis is a most formidable affection, and thus the prognosis of it would be very unfavourable. But such an opinion might well be inexact. It must be remembered, in fact, that we have examined here only

* I may, perhaps, be permitted to point out here that I was, if I mistake not, one of the first who attempted to show that the affections of the heart present differences anatomical and symptomatic in accordance with the mode of their production. Further, I believe that I have established important distinctions in the anatomical condition of the liver known since Laennec's time under the name of cirrhosis, and confess that I have been somewhat surprised to see my observations quoted literally without any reference to the source from which they were taken.

cases which terminated fatally. There is every reason to believe that, side by side with these cases, there exist others whose origin has been overlooked, for the mere reason that they are less serious and have terminated in recovery; the two preceding cases are, at least, in favour of this supposition.

However this may be, the syphilitic disorders of the heart are always to be feared on account of the important functions of that organ. The two following cases will make known these disorders and their gravity.

Violent oppression, asystole, epileptiform seizures.—Rapid death.—Post-mortem examination; cicatrices on the surface of the convolutions of the brain; membranous plate in the white cerebral substance; collection of fat globules in corpus striatum.—Multiple gummy tumours beneath the endocardium and in the thickness of the left ventricular wall.—Atrophy and degeneration of the muscular fibres.—Depressions and cicatricial furrows on surface of liver.—Double syphilitic sarcocele.

OBS. XL.—D., a painter æt. 29, a well-built young man, has for several months felt fatigue and unfitness for work; his skin is discoloured, earthy; but these symptoms attracted little attention, as he attributed them to his profession. For the last three days only he has found himself obliged to give up his work; he feels giddiness, vertigo, violent palpitations, general uneasiness, and a considerable amount of dyspnœa. A few minutes after his arrival he was seized with an epileptiform attack and lost consciousness almost entirely; he was affected with extreme dyspnœa. The extremities were cyanosed and slightly œdematous, the pulse very small and scarcely perceptible. On examining the chest, no abnormal sound could be clearly made out in the region of the heart; but that organ appeared to be enlarged and was evidently damaged. Some disseminated râles were heard in the chest. A short time afterwards, the patient died suddenly.

Post-mortem examination.—Decomposition null, rigor mortis, skin healthy. Two white, rounded cicatrices of small extent on front of one tibia; another cicatrix on prepuce; slight œdema about malleoli. The pharynx was not examined.

The meninges were not diseased. At first sight, the brain appeared healthy; but, on careful examination, manifest changes were soon observed, even with the naked eye: the left posterior cornu was firm and unusually resistant to pressure and it was seen, after having removed the pia mater covering it, that there existed, on the surface of two convolutions, several small star-shaped depressions of little depth, but recalling to mind, nevertheless, the furrows so common on the surface of the liver in cases of visceral syphilis. A section was made more deeply at this point into the white substance not far from the grey matter and showed a slightly prominent linear band of a greyish colour, nearly two inches in

length by $\frac{2}{3}$ of an inch in depth; at its upper part, it appeared to terminate in a thin, pink membrane, which spread itself out so as to form a kind of cyst. On microscopical examination this lesion was found to be formed of granular matter, a fibroid tissue, and very numerous embryoplastic nuclei rendered more apparent by the addition of acetic acid which dissolved a portion of the free granulations. In the neighbourhood of the fibrous band, the cerebral substance was little changed. In the corpus striatum were seen on section points of a yellowish colour, which, on examination with the microscope, were seen to be formed of fat globules disposed in masses. In some parts of the bulb, I had been struck by the same colour; but not having been able to make an examination of them until two days later, I was unable to ascertain whether the same lesion existed.

The gray matter of the convolutions was remarkable in some places for its firmness, the diversity of its colours, and chiefly for a yellowish tint. Of the capillaries in this substance, the smallest were covered with fine pigmentary granulations; in the course of the larger ones were seen small grains of hæmatine and fatty granulations; some of the capillaries of the corpus striatum were in an advanced stage of fatty degeneration. Not a single tubercle was met with in the lungs; towards the bases there were hypertrophic congestion and some patches of broncho-pneumonia. The bronchi were not examined.

Heart.—There was very little serum in the pericardium. The heart, which was enlarged and covered with a thin layer of fat, presented on its internal surface a manifest injection. When cut into, the incisions in the walls of this organ remained gaping. In the upper two-thirds of the left ventricle, immediately beneath the mitral valve, were seen in the whole circumference of the cavity, yellowish lenticular protuberances, situated beneath the scarcely thickened endocardium; between these disseminated protuberances a greyish, fibrous tissue was met with. The columnæ carneæ of the second and third order were indurated and atrophied; one of the columnæ of the first order was thickened and of a deep yellow colour. Higher up, at the base of the aorta, besides the small tumours projecting into the endocardium, there were found in the thickness of the ventricular wall yellowish or greyish tumours, some rounded, others in the form of a crescent. These tumours were, in general, surrounded by a pink ring and by a more or less thick layer of fibrous tissue; of the size of a pea or of a large lentil, they were not easily decorticated. The cavity of the ventricle was dilated. The ventricular wall, thickened in its upper two-thirds, was thinned in its lower third; an incision made at the junction of these two parts enabled us to ascertain from within outwards:

1st, The integrity of the endocardium; 2nd, a first thin layer, yellowish or pink and pretty friable; 3rd, a middle, resistant layer, whitish or greyish; 4th, a layer of a bronzed tint and composed in great measure of muscular fibres more or less changed; 5th, the external layer of fat, and lastly the pericardium, which was healthy.

The nodules situated beneath the endocardium, as well as those met with in the wall of the ventricle, were composed of nuclei, cells, and fibres

of conjunctive tissue. Each of these elements, much loaded with granulations, had become almost unrecognisable and, at some points, nothing was met with except a highly granular, amorphous matter. In the greyish portion surrounding the tumours were found only unchanged fibres of conjunctive tissue and some vessels. These fibres were the same as were met with in the greater part of the cardiac wall, wherever the middle fibrous zone existed. In the yellow portions, fat was found in greater or less abundance. The muscular fibres, pushed aside and compressed by the new growth, small, very evidently atrophied, and without visible striæ, presented in the interior of the sarcolemma very abundant fatty granulations; at some points they appeared to be agglutinated to each other by means of a fine granular substance, nuclei more or less granular, and fat globules. To sum up, there was a neoplasm formed of elements of conjunctive tissue, in a state of development or degeneration more or less advanced, forming on the left, sometimes small tumours, sometimes fibrous septa more or less thick and resistant. On the right side of the heart, valves healthy, slight dilatation without change in the cavities.

The spleen was enlarged; its length was about seven inches; its parenchyma was not sensibly changed; it was simply hypertrophied; when torn it appeared very granular. The prevertebral lymphatic glands, those situated in the course of the iliac veins, and some of those contained within the mesentery, were remarkable for the increase in their size, their mottled or brownish colour, their softness without friability, and, lastly for their elongated shape.

Intestinal tube.—A portion of the mucous membrane of the small intestines was reddish and studded with whitish nuclear points, which resembled psorentery. The kidneys were of a yellower colour than usual the epithelium of the tubules was changed; the web of the conjunctive tissue appeared thickened and some of the Malpighian corpuscles were atrophied.

The liver was remarkable for the deep depressions which occupied its anterior surface, and which, before any other examination, might suggest the idea of a syphilitic infection. The right lobe, normal in size, of a coffee-with-milk colour spotted with brown, and somewhat soft in consistence, presented at a short distance from the suspensory ligament, a circular depression deep enough to conceal the point of the little finger. From this depression ran a deep and sinuous furrow, in a vertical direction, which extended to the lower edge, while in an upward direction it stopped some centimeters from the upper edge. Another furrow, starting from the same depression, ran transversely. The floor of the depression and of the furrows was composed of a thin layer of yellowish and resistant fibrous tissue. The surface of a section of this lobe presented a colour which differed little from that of the external surface. No tumour was found in it.

The left lobe was atrophied and unrecognisable; it was at most $1\frac{1}{2}$ inch in height by $\frac{1}{2}$ of an inch in thickness; it was ploughed up with deep

furrows connected by fibrous bands and false membranes adherent to the neighbouring parts. Analogous furrows were also met with on the posterior surface of the same lobe. The cells were small and granular in the neighbourhood of the cicatricial furrows, and the conjunctive tissue



FIG. 4.—Syphilitic liver one-fifth of normal size. A, left half of right lobe; a, left lobe; b, gall-bladder; c, interlobular fissure; d, cicatricial depressions occupying about half the height of the organ; e, another cicatrix with false membranes.

more abundant at the same points; everywhere else the hepatic cells were rich in fatty granulations.

Testicles.—Before removing these organs, I ascertained that their size was rather diminished than increased; instead of escaping from the hand when pressed, they remained immovable and adherent to the tunica vaginalis. They were the seat of an abnormal hardness; they had lost their usual elasticity, and under the fingers were felt indurated patches, small tumours, and a kind of stickiness which appeared to be situated in the tunica albuginea. An anatomical examination revealed a state of perfect integrity of both epididymes, though it should perhaps be said that they were slightly atrophied. There was close and complete union of the two layers of the tunica vaginalis and thickening of the tunica albuginea. From this latter membrane proceeded, in the right testicle, very apparent whitish septa, which penetrated into its thickness and thus divided it into several lobules; between these septa, the secreting substance was of a more yellow colour than usual, which was produced by the fat globules and granulations contained in the interior of the spermatic lobules. The left testicle presented the same adhesions of the tunica vaginalis and tunica albuginea; the external septa were less apparent, but there were found in them several hard and yellowish fusiform tumours. A tissue entirely fibrous and vascular, analogous to erectile tissue, was met with near the edge of the epididymis. The alteration in the seminiferous tubes was very advanced (atrophy and epithelial degeneration). A fibrous or fibroid tissue more or less loaded with granulations formed almost exclusively the small gummy nodules.

Palpitations, extreme dyspnœa, cyanosis of the extremities, asystole.—Gummy tumours and fibrous transformation of walls of right ventricle.—Gummy tumours and cicatrices of liver; cicatrices of spleen and kidneys.

OBS. XLI.—M. F., æt. 44, entered la Pitié, September 24th.

This woman, who had a strong constitution, was not questioned as to her antecedents. Emaciated at the time of her admission, she complained of violent palpitations which, according to her own account, had commenced about six months before, and it was after a confinement, if she is to be believed, that these palpitations supervened. I was unable to ascertain what had become of this patient's last child; but she had a granddaughter who was at that time being treated for disease of the chest at the Hospital Sainte-Eugenie.

To the palpitations of which she complains are added from time to time fits of suffocation, and all these symptoms render her incapable of working. She was moderately stout, with a somewhat yellowish skin, no œdema of the extremities but an enlarged and slightly painful abdomen; she had a jerking cough, dyspnœa sometimes very distressing, and some râles in the chest. The heart's action was strong, visible to the eye, with a slight blowing sound with the first stroke, dull sounds, extensive dullness, and a small and frequent pulse. Some days after her admission, the patient observed that her left side appeared less warm than her right.

She lost her appetite, the dyspnœa increased, the palpitations became more violent, the uneasiness greater; almost always leaning upon a table at night, the patient called loudly for air. Mucous and bilious vomiting supervened, the pulse disappeared almost entirely, the extremities became cold and mottled.

October 1st and 2nd, the extremities were as cold as ice; the face was pale; the pulse was no longer perceptible at the wrist. The movements of the heart were tumultuous, dull, irregular, scarcely distinct. The head, inclined to the right, always rested upon the table at night; the veins of the neck, gorged with blood, were raised by the arteries running in their course. The impulse was evident in the precordial region during the ventricular systole; the vomiting continued; the dyspnœa increased, and death occurred on the morning of October 3rd, in a kind of coma.

Digitalis, acetate of ammonia, and chloroform to which M. Marotte had recourse as a last resource, were without effect.

Post-mortem examination.—Rigor mortis, no decomposition, skin everywhere intact.

The bones of the cranium were the seat of well-marked hyperostosis; they were twice the normal thickness. There was no lesion appreciable to the naked eye met with on examining the brain.

The lungs were the seat of œdema and passive congestion, but without any other appreciable change.

The heart was covered with a thin layer of fat, everywhere equal in thickness, and was enlarged. The right ventricle and pulmonary artery were distended with black coagulated blood. On making a longitudinal

incision in the direction of the infundibulum, the ventricular walls instead of collapsing, remained gaping; they were firm and indurated, especially in the neighbourhood of the septum where their thickness was considerable ($1\frac{1}{2}$ of an inch, whereas it was only $\frac{1}{2}$ of an inch in the rest of their extent). These walls had a fibrous appearance. The apex of the ventricle was normal; the change commenced a little above it and extended thence to the whole infundibulum.

On the whole internal surface of this part of the right heart, there were seen a great number of small lenticular protuberances, of a white or yellowish colour, which first of all suggested the idea of a varioloid eruption, and were not without analogy to the small yellow protuberances frequently met with on the internal surface of the aorta. Situated beneath the endocardium, which appeared healthy, these small tumours presented edges slightly sinuous; they were separated by spaces of a greyish brown colour; they were of considerable firmness and resisted under the knife, as did a great portion of the right heart. The red colour of the muscular tissue had been converted into a greyish tint; on examination with the microscope, the contractile fibres, atrophied or destroyed, were replaced by fibres of conjunctive tissue, an amorphous matter more or less granular, and nuclear or cellular elements in small quantity. The cavity of the ventricle was enlarged; the auriculo-ventricular orifice and tricuspid valve were unchanged.

The auricle was dilated but its parietes were intact. The orifice of the pulmonary artery and the whole of that vessel were healthy.

There was slight dilatation of the left ventricular cavity and thickening of the cardiac wall of that side; there was a yellowish colour of that wall, which was nevertheless healthy in the greater part of its extent. The orifices and valves were intact. With the exception of some fibrinous clots, soft and of recent formation, met with in the right heart, the blood contained in the cavities of the heart was black and fluid; the eye and the microscope discovered some fat globules on examining one of the fibrinous clots. There were concretions of blood slightly adherent to the upper part of the femoral veins; analogous concretions, but free and floating, existed in the pulmonary artery.

The liver was enlarged, brownish, and firmer than natural; its anterior or convex surface had lost its smooth appearance, and was cut up by furrows more or less deep, dark-coloured at their edges and resembling cicatrices. These furrows, at the bottom of which existed small greyish or whitish tumours, were situated close to the upper and lower borders of the liver and especially abundant in the neighbourhood of the suspensory ligament, where they were deeper. On cutting into the liver, there was seen at the upper part of the right lobe, about two inches from the surface, a small whitish tumour, hard and resistant to pressure; a greyish tissue, slightly pink and fibrous, occupied the circumference of this tumour. The hepatic substance in the vicinity appeared retracted and of a deeper brown colour. Fibres of conjunctive tissue, an amorphous and granular matter, nuclei and some plasma cells, such were the constituent elements of this tumour.

The spleen, increased in size, measured nearly eight inches in its vertical diameter, and presented on its surface depressions analogous to those of the liver, and from which proceeded fibrous bands which penetrated into the thickness of the parenchyma. The surface of the kidneys was studded with furrows and depressions in the form of cicatrices, the substance of the kidneys appeared to be intact.

The uterus was healthy, the ovaries were small, wrinkled, and atrophied. These organs had formed adhesions to the neighbouring parts.

§ 2. Syphilitic affections of the arteries and veins.

J. M. Lancisii, De aneurismatibus opus posthumum, p. 52; in *Scriptorum latinorum de aneurismatibus collectione*. *Petsch*, Dissertatio de exostosi cran., § 8, Ubinam aortæ aneurisma. Cité per Morgagni, Lett. lviii. p. 427. *Morgagni*, De sedibus et causis morbor., Lettre lviii. *Dittrich*, in *Prager Viertelj.*, 1849, t. i. pp. 21-41. *Gildemeester et Hoyack*, Nederl. Weekbl., Jan. 1854, No. 23. *Steenberg*, Den Syphilit. hjernelidelse Kjøb., 1860; et *Canstatt's Jahrb.*, Bd. iv. 1861, p. 328. *Wilks*, On the syphilitic affections of the internal organs, *Guy's Hospital Reports*, 1863. *C. O. Weber*, Sitz. Ber. d. Niederrhein, Ges. für Natur-und Heilkunde., xx., Neue Folge, x., *Medicin. Section*, p. 171, 1864.

A. ARTERIAL LESIONS.

Our knowledge concerning the syphilitic affections of the arterio-venous systems is slight. We find on this subject, in the writers of the last centuries, only very incomplete data, and the cases which bear witness to the existence of arterial modifications supervening in the course of syphilis are few in number. *Lancisi** relates two cases of aneurism, one of the left subclavian artery, the other of the right subclavian, both resulting from venereal cachexia consequent upon the alteration in the parts in the vicinity of the diseased vessels. The following is one of these cases:—

A fishmonger, of dissolute habits, addicted to the worship of Bacchus, Diana, Neptune, and Venus, opposed to the wounds he received from the latter only the insufficient vigour of his robust constitution. After numerous afflictions, he was seized with pains in the left clavicle, soon followed by swelling of that bone; arterial pulsations were afterwards felt beneath the tumour, and were accom-

* According to *Lancisi*, *Mark Aurelius Severinus* observed similar cases.

panied by pain in the shoulder and neck. Bleeding and purging, far from improving this condition, aggravated it. Not only was the artery compressed by the swelling of the surrounding parts, but these parts themselves became destroyed by suppuration. A treatment by mercurials and sudorifics succeeded to an unhopd for extent. The dilated artery merely lost its original elasticity. At the end of five years, there had been no relapse.

The second case, which differs little from the first, is not less surprising. Moreover, the following are the rules which Lancisi himself gives for arriving at the diagnosis of affections of this kind:—

“We recognise that an aneurism is of a syphilitic nature, not only because an impure coitus has preceded its development, or because manifest syphilitic symptoms have been observed in other parts of the body, but also and especially by the phenomena which have presented themselves at the point at which the arterial dilatation is situated. In fact, the pulsations of the artery do not show themselves at the first onset. Pains, most frequently nocturnal, occur in some ligament or bone, soon followed by a tumour which has begun by compressing the artery, and which afterwards, by the virulent suppuration to which it has given rise, has attacked the coats of the arterial vessel and, by producing a thickening or dilatation of them, has occasioned aneurismal pulsations.”

Plancus, quoted by Morgagni,* remarks that ulcerations and excrescences of the arteries which appear pustular often supervene in persons who have been affected with venereal disease:—

“*Arteriam magnam veluti ulcerosam et corrosam, variisque pustulis scatentem sæpe observavi in cadaveribus eorum præsertim qui syphilide laborarunt, et ad aneurysma aortæ, vel ad pectoris hydroperem sunt dispositi.*”

Morgagni's successors, those even who have occupied themselves the most with the study of venereal diseases, have entirely omitted to speak of the syphilitic lesions of the vessels, and if some authors have believed syphilis to be an efficient or determining cause of the changes in the circulating system, they have not brought forward

* *Epistola de monstribus citata in Morgagni Epist. anat. med. xxvii. art. 30.* Morgagni himself does not hesitate to attribute to syphilis certain changes in the aorta, and especially some aneurismal tumours of that vessel. But when we come to examine the cases given by that author, we find that they are not sufficiently conclusive to induce us to admit this ætiological relation.

any clear case in support of their opinion. Is syphilis then without effect upon the arterial system? We think not, when we see, in several recent cases of visceral syphilis, the arteries of the brain and especially the carotid arteries altered or obliterated in consequence of an entirely local action. Without wishing to prejudge here the part to be accorded to syphilis in the production of these changes, let us give a rapid sketch of these cases themselves.

Dittrich, Gildemeester and Hoyack, Virohow * and Meyer,† have each once observed the obliteration, by neoplasms, of one of the cerebral carotids in individuals affected with visceral syphilis.

The following observation may give an idea of the arterial change in all those cases:—

A man 34 years of age had vertigo, cephalalgia, and epileptiform attacks; the movements were feeble on the left side, sight less clear, and there was, moreover, some difficulty of speech. Later on, coma and death supervened. At the post-mortem examination, traces of cicatrised buboes were discovered in the inguinal regions. The thickened dura mater adhered, by the aid of a fibroid tissue, to the cerebral substance, which was softened at the point of adhesion and contained at that point several tumours of an opaque white colour and of the size of a nut. At the anterior part of the corpus striatum there existed a cyst of the same size. The rest of the brain was healthy, but the right carotid artery and its branches were obliterated by fibrous cords adherent to the vascular wall. The liver, studded with cicatrices, contained several small knotty tumours.‡

This lesion, which will be met with again further on (see Obs. XLIX. Vol. II. p. 60), was again observed by us in 1863, in company with our friend Dr. Henry, in a case under the care of our common master, Professor Grisolles, with this difference, however, that the arterial walls alone were affected.

A young man of 25, five months under treatment for a syphilitic eruption which did not disappear, sank rapidly after having presented the phenomena of encephalitis. At the post-mortem examination we found, together with tumours of small size, a partial encephalitis and an almost complete obliteration of both the internal carotid arteries

* *Syphilis constitutionelle*, tr. fr., 1859.

† See *Schmidt's Jahrbücher*, t. cxiv. p. 312, 1862.

‡ Bristowe, *Transact. of Patholog. Society of London*, t. x. p. 21.

at their termination. The diseased arterial walls were the seat of a neoplasm which rendered them thicker and greatly diminished their calibre. It was not a question, in this case, of an atheromatous lesion, but of a product formed of rounded nuclei and some cells of conjunctive tissue.

Steenberg and Wilks have reported similar cases. The latter saw in a syphilitic woman, aged 38, a deposit of new formation situated in the thickness of the walls of the carotid and vertebral arteries. We are indebted to Dr. Weber for an observation which may take its place with the preceding, for it differs only as regards the seat of the change, which was the pulmonary artery. There was a gummy tumour of the size of a bean, which, having been developed in the thickness of the middle coat, projected into the interior of the vessel; there existed at the same time gummy nuclei on the cranium and in the liver. In a young girl affected with syphilis, and suffering from interstitial nephritis, Virchow found the aorta studded with sclerotic and atheromatous patches.

Thus brought together, these various cases show us an arterial lesion of a peculiar nature (arteritis) supervening, without appreciable determining cause, in individuals affected with syphilis. That there is a connection between this lesion and syphilis is very probable. We are, as it appears to us, the more authorised to admit this connection because the arterial neoplasm does not differ notably, in the cases quoted, from the morphological product by which syphilis manifests itself in the other parts of the body. We here find again the two varieties of change, the diffused and the circumscribed. This first point once established, what course does the arterial modification in question run?

We know already that it has sometimes produced the obliteration of the vessel and a consecutive change in the corresponding organ. But at other times it would seem as if it might occasion the formation of an aneurism, and in this respect it may be asked whether the vascular tumours mentioned by Lancisi are not attributable to that origin.

Wilks saw a case of aneurism of the aorta which he did not hesitate to attribute to a syphilitic origin, and Richet appears fully disposed to admit the same origin in reference to a case which we communicated to the Surgical Society in September, 1863.

An aneurism of the subclavian, of which we were able to watch the treatment, improved under the influence of iodide of potassium.

The following case, communicated to the Anatomical Society by our colleague, Dr. Blachez, and in reference to which a discussion arose concerning syphilitic cicatrices of the liver, deserves to be given here. An officer of artillery, 42 years of age, affected with tertiary syphilis, was carried off by meningeal hæmorrhages resulting from a rupture of the basilar artery. That vessel was distended in its middle and terminal portion so as to have attained the size of a large goose-quill. Its walls were thickened and, as it were, infiltrated with a whitish granular matter of fibrous appearance. Towards its right lateral portion it presented a small opening with irregular edges two or three millimeters in diameter. There was a large cicatrix on the surface of the liver.*

Such are the arterial lesions which are observed to manifest themselves in the course of syphilis. Remarkable for a pretty special seat (most frequently the carotid arteries or their branches), these lesions express themselves by symptoms in accordance with the functions of the organ or the portion of an organ which corresponds to the vessel diseased. Thus there have been observed most frequently in such cases, where there was obliteration of a cerebral artery, encephalic derangements and especially hemiplegia. The affection of the pulmonary artery (obs. Weber) produced evils of another nature; dyspnoea and pulmonary apoplexy.

The prognosis in such a case is evidently dependent upon the seat of the change and the functional importance of the organ secondarily affected.

B. VENOUS LESIONS.

No case has hitherto furnished the certain demonstration of any lesion of the veins attributable to syphilis; and if, at an advanced period of that disease, those vessels become the seat of fibrinous concretions (thrombosis), this is to be regarded rather as the effect of the cachectic disorders engendered by the syphilis than of the syphilis itself.

We may be permitted to believe, however, that the veins do not altogether escape the modifying action of the syphilitic poison; but these modifications have still to be discovered.

* *Bulletins de la Société anatomique*, 1863, p. 33. *Ibid.*, Lancereaux, *Note relative à la valeur des cicatrices du foie dans le diagnostic anatomique de la syphilis viscérale.*

As regards the capillaries, all that can be said about them is, that they do not manifest any special change which appears to be attributable to syphilis. Let us remind our readers that it is their external or adventitious coat, which is the usual starting-point of gummy products; let us add also that fatty degeneration of these vessels is a very frequent phenomenon in the last period of syphilis (syphilitic cachexia).

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